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REPORT

of a

SURVEY OF TRANSPORTATION

on the

STATE HIGHWAY SYSTEM OF OHIO

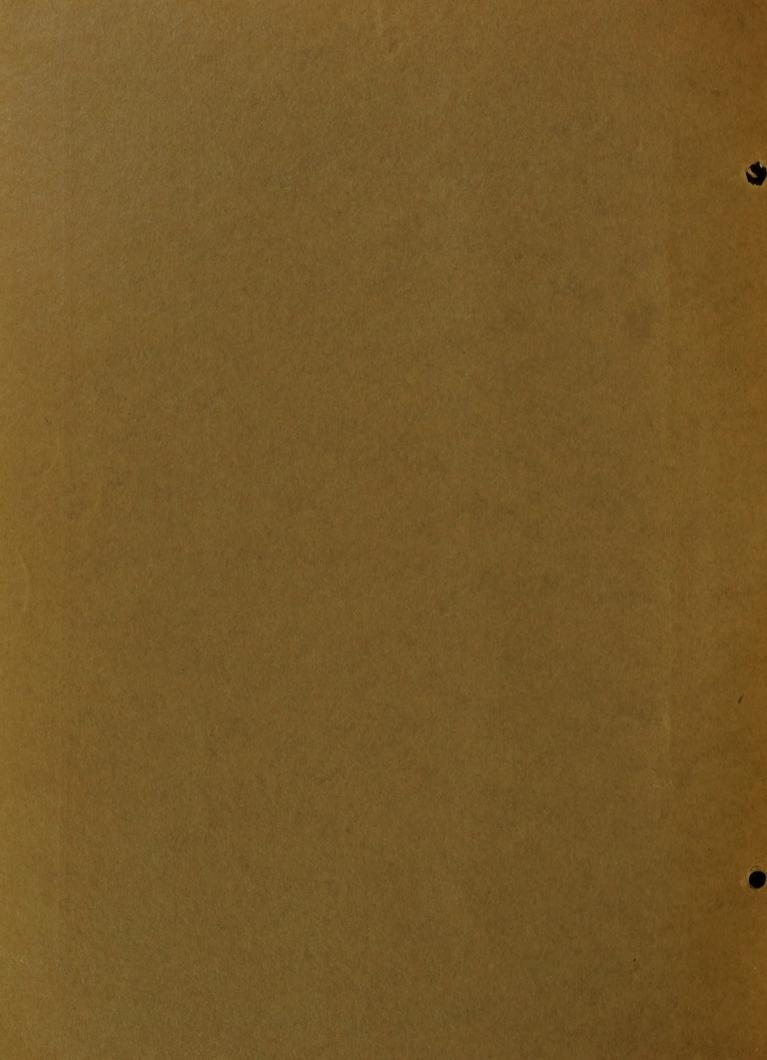
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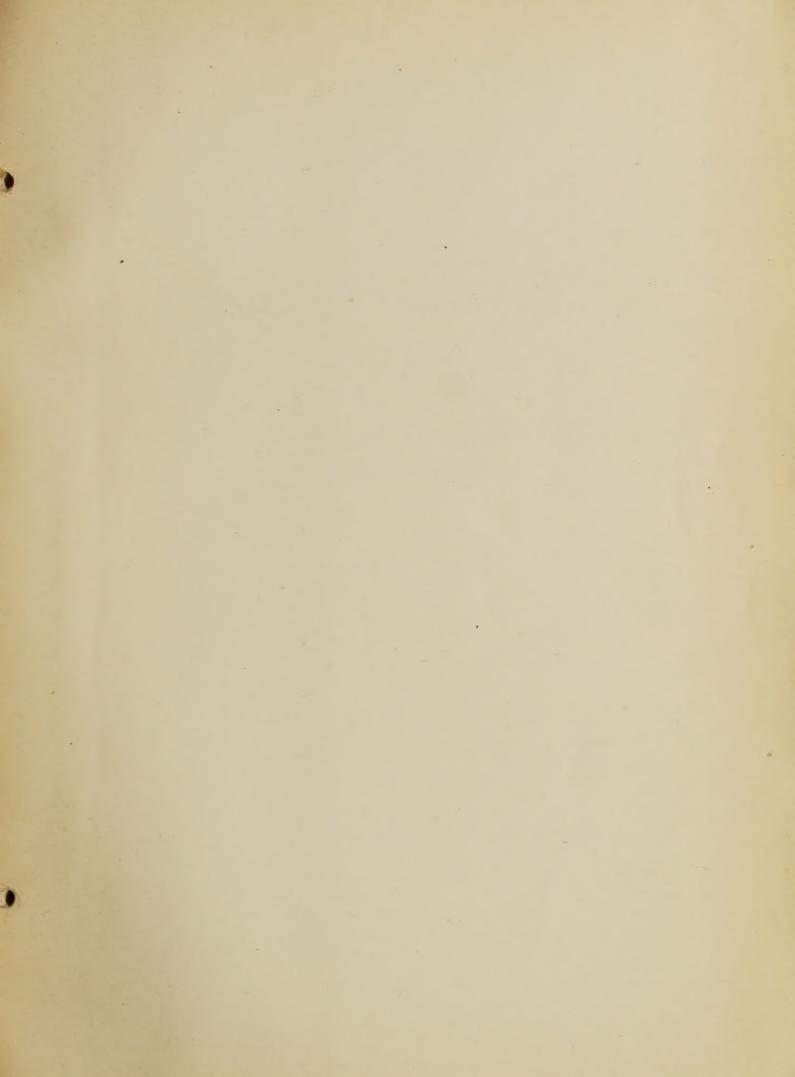
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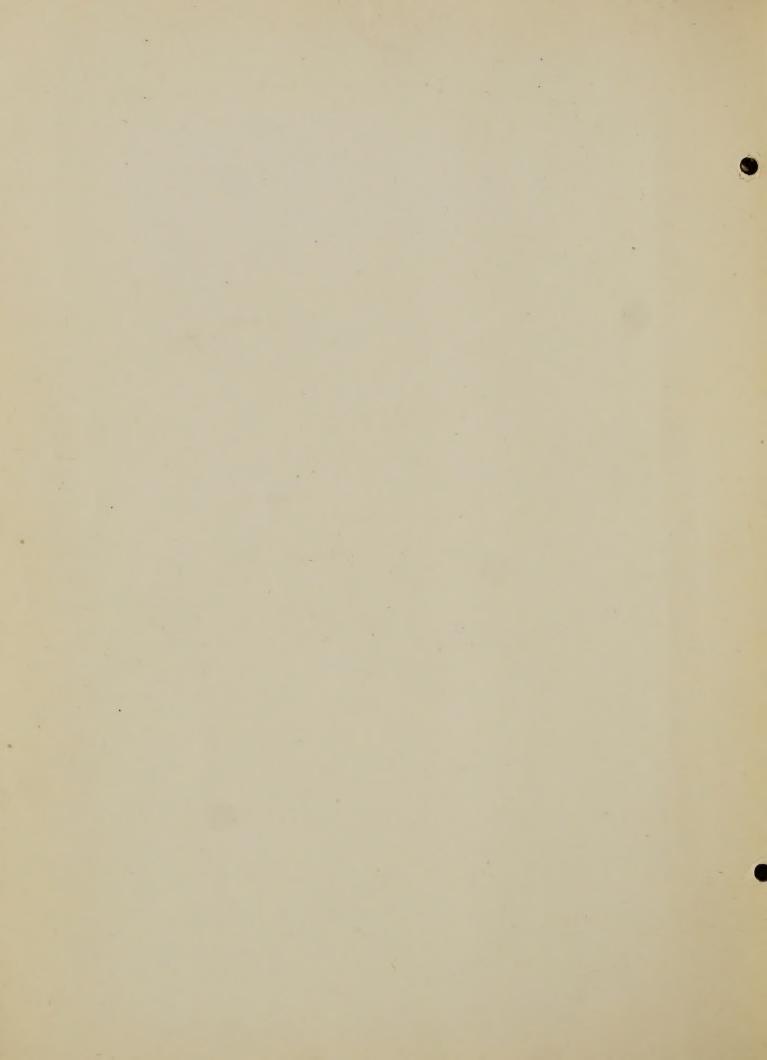
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THE OHIO DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

1927







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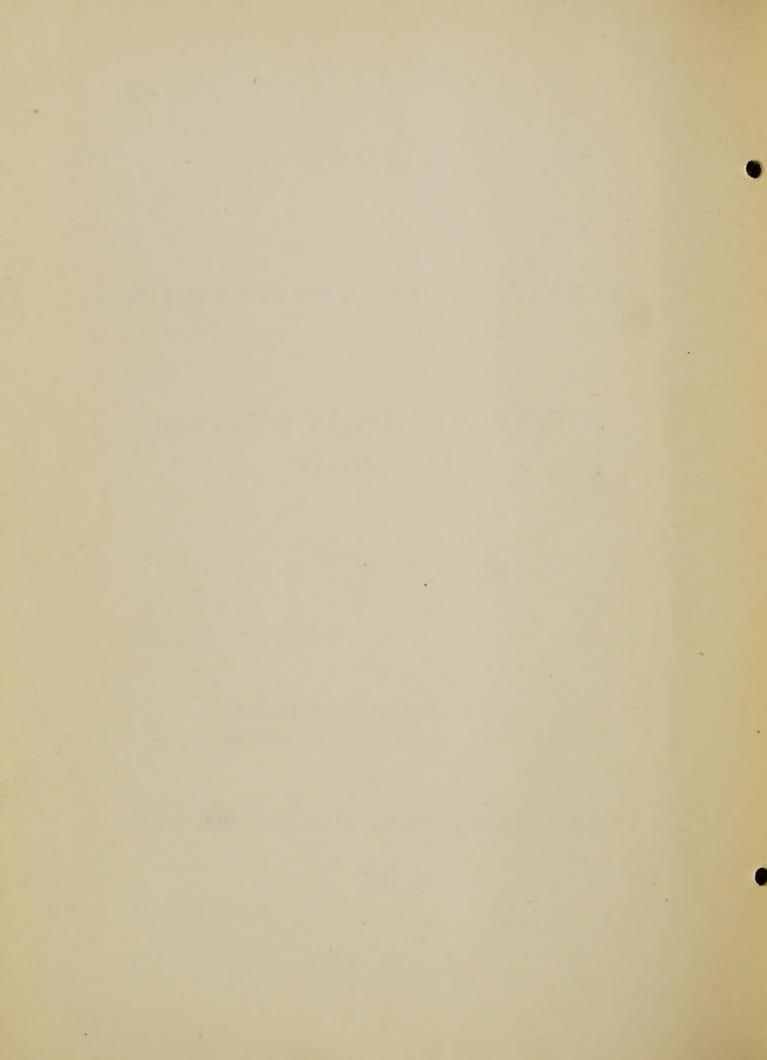


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Foreword

THIS report contains the results of highway traffic studies of the State, County and Township road systems of Ohio conducted during 1925 under a cooperative research agreement between the Bureau of Public Roads, United States Department of Agriculture, and the Ohio Department of Highways and Public Works.

This investigation was undertaken in order to obtain essential facts concerning traffic on Ohio highways as a basis for planning the development of the Ohio State highway system to serve present and future traffic.

The conclusions are based upon the present density, type, loading and distribution of traffic units and traffic classification of State highways, upon present population and population trends, upon predicted future traffic, and upon an economic and physical analysis of other factors affecting the planning of a program of highway improvement.

The first section of the report contains a summary of principal conclusions; the second section contains the detailed data; and the third section the proposed plan of State highway improvement endorsed by the Ohio State Department of Highways and Public

Works and the United States Bureau of Public Roads.

The highway traffic studies upon which the report is based were conducted under the joint supervision of Thos. H. MacDonald, Chief of the Bureau of Public Roads, and George F. Schlesinger, Director, and L. A. Boulay, former Director of the Ohio State Department of Highways and Public Works. J. Gordon McKay, Chief of the Division of Highway Economics, Bureau of Public Roads, directed the work of the survey and preparation of the report, assisted by O. M. Elvehjem, E. T. Stein, L. E. Peabody and B. P. Root, all of the Division of Highway Economics, and Harry J. Kirk, Ohio State Highway Engineer, and Harry E. Neal, Ohio Traffic Engineer.





THE OHIO HIGHWAY TRANSPORTATION SURVEY

HIO as a State recognized the necessity of assisting the counties in the improvement of main highways as early as 1804. This participation, based on the State-aid principle, was limited to financial assistance to the counties on construction projects proposed by the counties and carried on under their direction. State financial assistance continued until 1850. From 1850 to 1904 the State took no part, financial or otherwise, in the improvement of highways, leaving all responsibility to the counties and townships.

Paralleling the experience of other States, between 1892 and 1904, renewed public demand for highway improvement brought a return to State initiative and control and in 1904 the State department of highways was created, functioning in an advisory capacity until 1910. The principle of State aid to the counties was again introduced in 1905. A definite system of State highways was established in 1911, and the duties of the State department of highways were enlarged to include highway construction on the State system.

During the period from 1911 to 1927, the mileage of the State system has been steadily increased, and a growing degree of control over the initiation, construction, and maintenance of

State highways has been taken over by the highway department.

Until 1927 the method of developing State highways with county cooperation remained the basic method of road improvement in Ohio. The highway law enacted in 1927 eliminates county cooperation in the construction of State highways except in those counties having a tax duplicate over \$300,000,000, and in these counties limits county cooperation to reconstruction of worn-out surfaces.

The State is now responsible for the construction and maintenance of the State system except cooperative reconstruction projects in the wealthy

During the period from 1904 to 1914 highway improvements, on what now constitutes the State system, consisted principally of narrow gravel and waterbound macadam construction. From 1914 to 1925 the record of highway improvement was characterized by the construction of surfaces superior to waterbound macadam and the betterment of unimproved low-traffic routes with gravel surfaces.

Of the approximately 11,000 miles of State highways on January 1, 1926, there were 5,194 miles that were improved with brick, concrete, as-

phalt and bituminous macadam surfaces, of which more than half had surfaces less than eighteen feet in width and approximately 400 miles were old and worn-out pavement under county maintenance. Surface-treated macadam surfaces, of which there were 1,307 miles in 1925, will require retreatment or reconstruction when the traffic materially increases. The remainder, approximately two-fifths of the total State mileage, comprised 3,000 miles of gravel, slag and stone, and 1,282 miles of unimproved highways.

The principal highway problems now confronting the State are the reconstruction of the old, worn-out surfaces, expensive to maintain, the widening of narrow pavements, the improvement of unimproved sections of the State system, the elimination of the most dangerous railroad grade crossings, and the distribution of present highway revenues satisfactorily to complete the State system of roads.

Anticipating the need for a definite program of reconstruction and development, and realizing the necessity of having as a basis for a sound plan of highway improvement accurate data with respect to the traffic on the various sections of the State highway system, the Director of Highways and Public Works entered into an agreement with the United States Bureau of Public Roads to conduct a cooperative survey of transportation on the highways of the State.

The results of the survey, endorsed by the Ohio State Department of Highways and Public Works and the Bureau of Public Roads, show that during the next five years the State should reconstruct 1,220 miles of the State system, widen 1,594 miles, and build 1,707 miles, the latter comprising 1,007 miles of construction superior to gravel and 700 miles of traffic-bound improvements. The cost is estimated at \$100,000,000.

On the basis of the traffic observed during the survey, it is estimated that the State highway system, 13.0 per cent of the total rural mileage, provided highway service for a traffic of 2,160, 435,000 vehicle-miles, equal to 57.7 per cent of the total traffic on rural roads in the State in 1925; that the county highways, which include 27.1 per cent of the rural mileage, provided service for

I,108,870,000 vehicle-miles, 29.6 per cent of the total traffic; and that the township highways, which constitute 59.9 per cent of rural mileage, provided service for 477,055,000 vehicle-miles, or only 12.7 per cent of total rural traffic. The daily traffic on the State system averages over nine times that upon the county and township roads. These facts show the necessity of alloting a sufficient portion of total highway revenues to complete the improvement of the State system of highways.

It is clearly shown by the survey that the principal routes of the State system comprising what are known as the Federal-aid and main market systems are, with a few exceptions, the most important traffic routes of the State. The improvement of these routes, however, has not, up to this time, been entirely consistent with their traffic importance. There are sections of gravel and old, worn-out surfaces, narrow 9 to 16 foot pavements, as well as unimproved sections on these heavily traveled routes.

The largest volume of motor-vehicle traffic is found in the areas adjacent to large centers of urban population and on the main, through-traffic routes.

Of the 11,000 miles of the State highway system, 1.2 per cent carried 2,500 or more motor vehicles per day, 7.8 per cent carried 1,500 or more, 29.4 per cent carried 600 or more and 70.6 per cent carried less than 600 vehicles per day in 1925.

The northeastern part of the State is the most important traffic area and is also the region of densest population, motor vehicle registration, and industrial development. The southwestern area is very close to the northeastern section in traffic importance. The northwestern and southeastern parts of the State are of least present and expected future traffic importance.

Motor-truck traffic is an important part of total traffic on the principal routes. On the State system in 1925, 2.7 per cent of the mileage carried 200 or more trucks per day, 5.7 per cent carried 150 or more, 13.1 per cent 100 or more, and 27.5 per cent carried 60 or more trucks per day. Based on the traffic forecast, it is expected that by 1935 over 1,300 miles of State highways

will carry 200 or more trucks per day, while a comparatively small mileage is expected to carry from 500 to 1,000 trucks a day.

Four-fifths of the trucks operating on the State system are small units, $2\frac{1}{2}$ tons capacity or less. The comparatively small number of large-capacity trucks and heavy loads observed may be attributed in a measure to the gross load limitation of 20,000 pounds fixed by law in the State.

The average daily density of traffic in 1925 was 538 vehicles on the State system, 132 on county highways and only 26 on township roads, each mile of road of the State system providing traffic service more than equal to that of four miles of county and twenty miles of town roads.

The Federal-aid system, slightly more than half the State system, carried 70.6 per cent of the daily traffic of the State system; the main market roads, approximately one-third of the State-system mileage, and included for the most part in the Federal-aid system, carried over half the traffic, and the principal routes of the system, 8.8 per cent of the mileage carried over one-fourth of the traffic.

Foreign traffic comprises but a small part of the total traffic except on the principal throughtraffic routes. More than half of passenger car traffic consists of cars used for business purposes.

The survey clearly shows that the traffic using the State system is predominantly city passenger car and motor truck traffic, farm-owned passenger cars and motor trucks making up only 12.4 per cent and 15.5 per cent, respectively, of the total passenger car and motor-truck traffic. The improvement and maintenance of State highways is, therefore, primarily the result of the demand for highway service by city motor vehicle owners.

The volume of traffic in a given area is principally produced by the population residing within a radius of thirty miles, since less than 30 per cent of the truck traffic and less than 40 per cent of the passenger car traffic travels more than thirty miles.

The distribution of population is an important factor in planning highway improvements. Of the entire area of the State 80 per cent has a population of less than 80 persons per square mile and is the home of only 22.7 per cent of the total

State population, whereas the 9.4 per cent of the area that has a population of 160 or more persons per square mile includes 69.3 per cent of the population of the State.

These variations indicate marked differences in the necessity for highway service in the several parts of the State. In the densely populated areas the highway system should be planned to serve large volumes of traffic between the principal centers of population with tributary feeder routes connecting minor population centers with the primary traffic routes. These routes should be of sufficient width and improved with surfaces adequate to carry the large daily volume of traffic, as directly as possible; obstructions to the free movement of traffic, such as railway crossings at grade, sharp curves, heavy grades and congested traffic sections should be eliminated, and by-pass routes should be constructed to avoid the congestion which occurs when a main route passes through the business center of small villages and cities. In the sparsely populated areas the volume of traffic is smaller and its sources more scattered. A connected system of main routes comprising a smaller mileage, improved with gravel or the lower types of paved surfaces where traffic warrants such improvements, should satisfactorily meet traffic requirements in these areas, except on the main through routes traversing them. The removal of obstacles to the easy movement of traffic is not an important problem in areas of low population and traffic, particularly when the expectancy of future traffic increase is small.

The density of traffic on the various roads of the State system has been used as the basis for an estimate of traffic on the same roads in 1930 and 1935, applying for this purpose, the relation between the increase in traffic on the highways and the ratio of population to motor vehicle registration observed in other States. In 1925 there was one motor vehicle for each 4.7 persons in Ohio. Extending the past trend of this ratio to 1935, it is estimated that there will then be one vehicle for each 2.82 persons. On this basis the registration of 1935 is estimated at 2,607,000 motor vehicles, a registration approximately twice as great as that of 1925. As the yearly increase of motor-vehicle traffic on the highways has been

found to be practically in direct proportion to the growth of motor-vehicle registration, it may be expected that traffic on the State highways will increase 51 per cent between 1925 and 1930, and 28 per cent between 1930 and 1935.

As a basis for the plan of highway improvement, the State highways are classified in three groups designated as major, medium and minor traffic highways, according to their average daily Experience in many States indicates that ordinary untreated gravel and similar surfaces cannot be economically maintained when the traffic exceeds 500 to 600 vehicles per day and similar experience in Ohio points to approximately 600 vehicles per day as the limit. Above that traffic density the type and design of surface required is largely a function of the frequency of heavy loads, the choice of types including bituminous



Old S bridge on the National Pike, now U.S. Route 40

traffic. Routes or sections of routes carrying 1,500 or more motor vehicles per day are classed as major routes; those carrying 600 to 1,500 vehicles per day as medium routes; and those carrying less than 600 vehicles daily are classed as minor routes. The routes or sections of routes are classed in this way on the basis of the observed 1925 traffic, and the estimated traffic for 1930 and 1935 is employed in a similar manner to indicate the probable classification in those years.

macadam for the lower densities and the several rigid types for roads of greater density.

If, on the basis of this experience, those sections of the Ohio State system which carry a traffic of 600 or more vehicles per day be considered as requiring a type of surface superior to untreated gravel, it is found that in 1925 over one-third of the 11,000 miles of the State system, or 3,852 miles, required such surfaces, and ten years later in 1935, based on the estimated traffic, approximately half the system, or 5,221 miles, should be so improved.

EARLY HIGHWAY DEVELOPMENT

ARLY traces and trails of the Indians were the routes used by the early explorers and settlers, and these primitive paths had a marked influence on the settlement and development of the State, determining the locations of towns, villages, and many of the present highways. Cleveland, Cincinnati, Columbus, Dayton, Akron, Toledo, Canton, Portsmouth, Zanesville, and Sandusky are examples of the influence of water routes and early trails on the location of Ohio cities.

In 1799 Ebenezer Zane, authorized by the Federal Government, opened a road known as Zanes Trace, from Wheeling through Cambridge, Zanesville, and Chillicothe to Aberdeen on the Ohio River. For forty years this trace was the main highway of commerce and travel through southern Ohio.

One of the principal factors influencing the progress of Ohio during this early period was the building by the United States Government of the great national road, extending from Cumberland, Md., through Pennsylvania, Ohio, Indiana, and Illinois to the Mississippi River. Construction of this road, the Cumberland Pike, was completed on the section between Cumberland and Wheeling in 1817. In Ohio the road, following Zanes Trace approximately from Wheeling to Zanesville and thence due west through Columbus and north of Dayton to the Indiana line, was completed in 1837.

Transportation was slow and expensive over the early roads. The change from the bridle path to the wagon road resulted in important economic and social changes. The freight wagon replaced the pack train, and with the introduction of the stage coach there began an era of highway transportation which hastened the early settlement and economic development of the State.

State roads, authorized by the legislature between 1804 and 1810, and county, township and other main routes are shown in Figure 1. Many of the routes indicated on the first Ohio road map of 1810 are a part of the State highway system of 1926.

The early development of connected roads was largely in southern Ohio. This was largely due to the influence of water routes which played so important a part in the early settlement, an influence which was felt up to 1850. Throughout this entire period road development was most extensive in the southern section. The northeastern section was of secondary importance during this period. Cincinnati was the industrial and Chillicothe the political center of the State during the period prior to 1850. A century later the importance of the sections from the standpoint of highway traffic was reversed, northeastern and northern Ohio being the most important and



The oldest house in Ohio; built by the Ohio Land Company at Marietta in 1788

southern Ohio the least, on account of the commercial and industrial development and centralization of population in the north.

Road improvement was carried on largely by turnpike companies until 1843, when the county road commissioners were authorized by the legislature to construct free turnpikes, financing construction costs by levying taxes on all land located within two miles of the road.

The canal era of transportation began in 1825. In 1833 the State owned 400 miles of canals; in 1845, 800 miles, and by 1850 a total of 1,000 miles. The Miami and Erie, Ohio, Pennsylvania

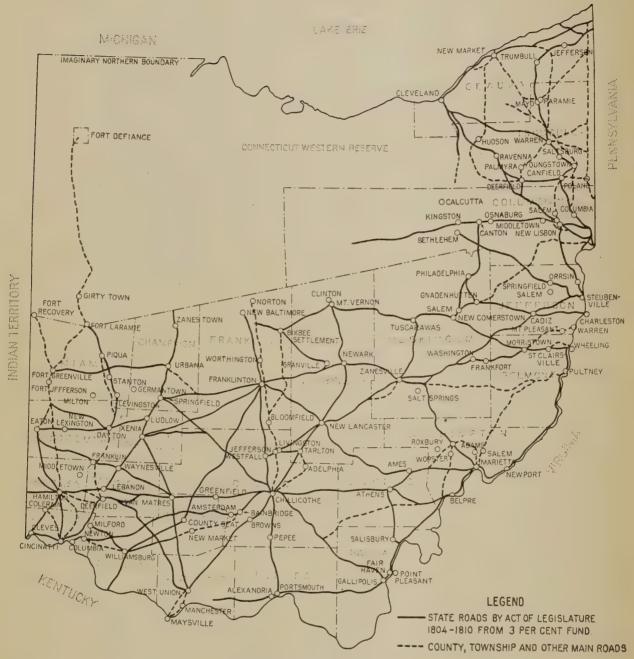


Fig. 1-Road Map of Ohio, 1810

and Ohio, Sandy and Beaver, and Whitewater were the more important canals of the State.

Rail transportation began in 1837. The Civil War and the following industrial depression marked the beginning of the canal's decline as a major part of the transportation system of the State and the emergence of the railroad as the principal method of freight and passenger haulage.

During the period of railroad development and the decline of the canal system public attention was diverted from road improvement; and the highways were not restored to their early importance as a transportation factor until the early part of the present century.

The first road law of 1792, enacted during the territorial period, provided for the opening of roads by a petition of 12 landowners. Although the law has since been modified there is a great similarity between its provisions and the law of 1925.

In 1804 a State fund was created which, because it was made up of three per cent of the income derived from the sale of public lands in the State by the Federal Government, was known as the "three per cent fund." It was this fund which made possible the system of early State roads and road improvements until 1850.

No systematic plan was followed, and from the beginning a practically continuous battle raged in successive legislatures over the distribution of construction funds from the "three per cent fund." From 1804 to 1830 the State road expenditures were \$342,000.00. After 1830 revenue from the sale of public lands diminished and the importance of the "three per cent fund" decreased.

In 1819 the first State tax levy for road construction was enacted, providing for \$1.00 for each 100 acres of good land; seventy-five cents for medium land and fifty cents for poorer lands.

Highway rights of way were established in 1824, those of the State roads being 66 feet, of the county roads 60 feet, and of the township roads 40 feet in width.

The change in policy which took the State out of active participation in road construction and maintenance was initiated in 1851 with the adoption of the new constitution; and thereafter, until 1904, the counties and townships were solely responsible for road improvement. So firmly settled was this policy that, in 1892 when, in response to public demand for State assistance, a commission was appointed by Governor McKinley to investigate the need, the Commission recommended that "the State maintain an attitude of masterly inactivity, that public highways could never be more than a matter of local concern and should be left to the local communities." Following this advice the legislature made no change in the laissez faire policy of the State.



Old tollgate on the National Road, now U.S. Route 40

Modern Highway Development

The State Department of Highways was created in 1904, but functioned at first only in an advisory capacity. The principle of State aid, used from 1804 to 1850, was again introduced in 1905 when each county was allotted \$113.00 for road improvement by the legislature; and this amount was increased each year until 1911, when \$5,000 was received by each of the 88 counties. In 1909 motor vehicle license fees were first introduced as a source of highway revenue, the income being distributed equally among the counties as State aid for road improvement.

The change in the duties of the State Department of Highways, which substituted actual control of highway construction for the purely advisory work with which it was first charged, occurred in 1910; and the first State system of

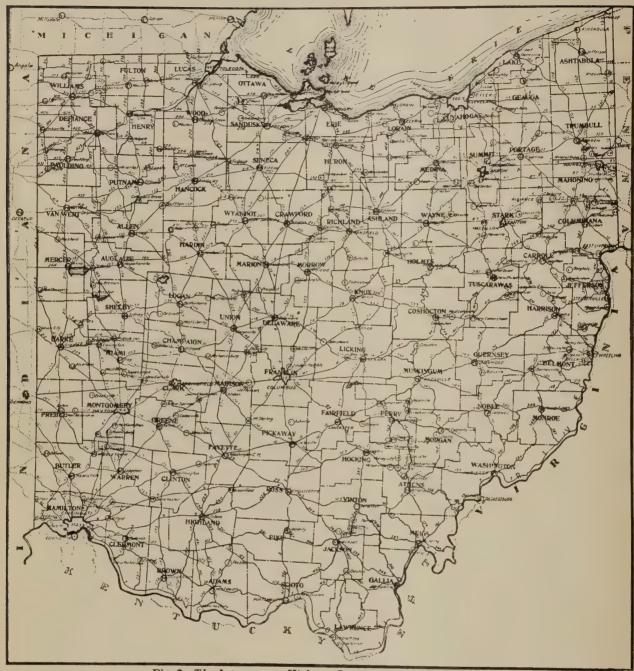


Fig. 2—The Inter-county Highway System as Authorized in 1911

highways, known as the inter-county system and shown in Figure 2, was authorized in 1911. This system was to be improved by the State in cooperation with the counties, and the principle of developing State roads in cooperation with the counties remained until 1927 the basic method of road improvement in Ohio.

A State levy of half a mill for the creation of

a State highway improvement fund, imposed in 1913, was reduced to three-tenths of a mill in 1914, increased to half a mill in 1917 and discontinued as a source of highway revenue in 1923.

The State Highway Advisory Board, with power to approve State contracts and the apportionment of funds to the counties, was created in 1917 and abolished in 1921.

The highway law of 1923 required the establishment of county highway systems, connecting the cities and villages of each county and joined with the inter-county system. To the cost of constructing the highways of these systems the State was authorized to contribute not less than \$1,000 and not more than \$2,000 for any one township each fiscal year; but the State department was given no control or supervision over the expenditure of the funds thus apportioned.

An act revising and recodifying the highway laws of the State was enacted in 1927. This measure abolishes county cooperation in the construction of State highways, except in counties having a tax duplicate of over \$300,000,000, which are permitted to cooperate in the reconstruction of worn-out surfaces. The measure also establishes a highway department separate from the department of public works, abolishes the inter-county and main market road system and establishes a State highway system.

Gasoline taxation was adopted as a source of highway revenue in 1925, when provision was made for a tax of two cents per gallon for maintaining, reconstructing and widening the main market and inter-county highways. Thirty per cent of the revenue from this tax is appropriated to municipalities, in proportion to the number of motor vehicles registered, for the purpose of maintaining and repairing public streets within municipal limits; twenty-five per cent is paid equally to the counties for maintaining county highways; and forty-five per cent is appropriated to the Department of Highways and Public Works for maintaining, repairing, reconstructing, and widening State highways.

New highway legislation in 1927 provides for an increase of one cent per gallon in the gasoline tax. Revenues from this increase are alloted to the State highway department for construction of State roads.

STATE HIGHWAY IMPROVEMENT

N January 1, 1914, there were 9,393 miles of inter-county highways, improved as shown in Figure 3 and Table 1. At that time traffic-bound stone roads constituted the principal type of improvement and less than half of the system was surfaced with types superior to gravel.

Table 1—State of Improvement of the Inter-County Highway System, January 1, 1914

Type of surface	Miles
Brick. Concrete. Waterbound macadam. Traffic-bound macadam. Gravel. Earth. Other types.	179.3 16.3 206.0 3,102.2 2,721.7 3,144.3 24.1
Total	9,393.9

On January 1, 1926, the system had been increased to approximately 11,000 miles and was

improved as shown in Figure 3 and Table 2. By that date the mileage of waterbound macadam had been considerably reduced; the mileage improved with surfaces superior to gravel had been

Table 2—State of Improvement of the Intercounty Highway System, January 1, 1926

Type of surface	Miles	
Brick	1,412.4	
Concrete, plain	646.1	
Concrete, reinforced	821.3	
Sheet asphalt	292.7	
Kentucky rock asphalt	162.5	
Rituminous macadam	1,859.2	
Surface-treated macadam	1,307.2	
Gravel, slag, stone, cinders.	3,000.0	
Earth and unimproved	1,282.4	
Total	10,783.8	

increased to more than six-tenths of the total; and approximately one-fourth of the total mileage was improved with concrete or brick pavements.



At the city limits of Zanesville on the National Road in 1913

The map (fig. 4) shows the character of improvement of the Federal-aid and inter-county highway systems and the width of surfacing as of January 1, 1927.

Widths of rights of way on the present highways have been fixed largely by early restrictive legislation and by the width adopted for various roads laid out by the State, counties, and townships and also by the early turnpike and plank road companies. On State roads the present width varies from 40 to 120 feet with 60 feet predominating. The Director of Highways is authorized to acquire additional or new right of way by purchase or condemnation, but on pro-

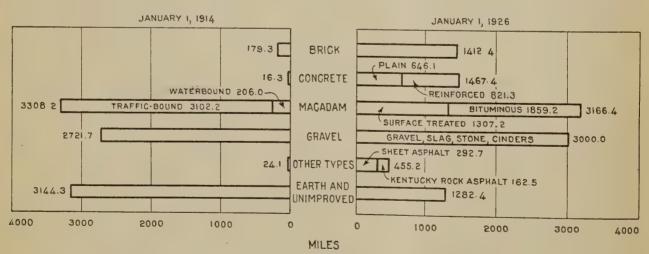
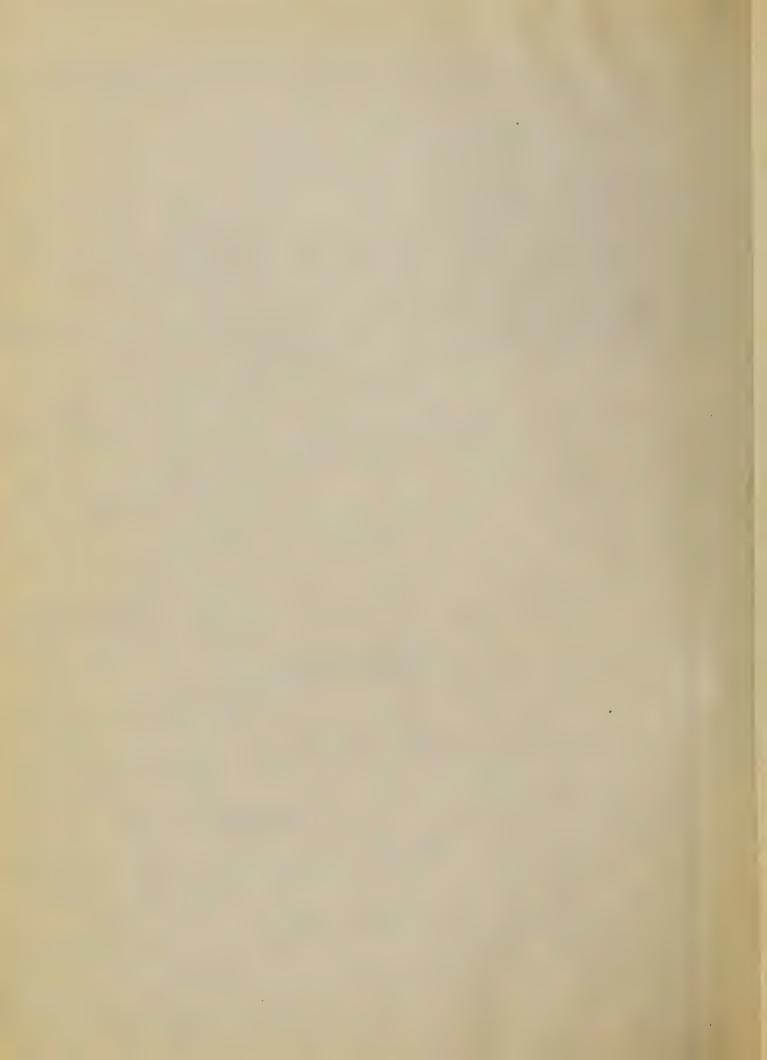
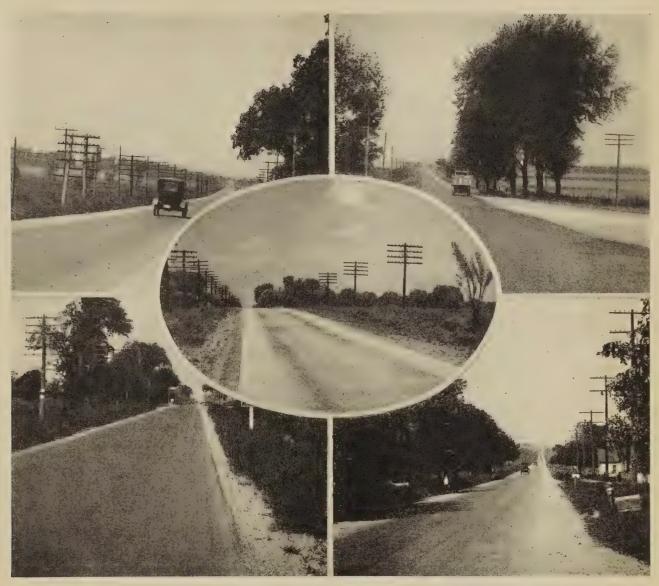


Fig. 3-State of Improvement of the Inter-county Highway System in 1914 and 1926







Types of Ohio Federal-aid roads

Upper left—Bituminous concrete

Lower left—Kentucky rock asphalt

Center-Concrete

Upper right—Brick

Lower right—Bituminous macadam

jects in which the State and a county cooperate the county is required to provide the right of way.

Present surface widths of State highways range from 10 to 50 feet, with 14, 16 and 18-foot widths predominating. A large mileage of narrow surfaces, now part of the State system, was constructed by the State and counties in past years as a temportary expedient to provide as large a mileage of surfaced roads as possible with limited funds. At present no surface less than 18 feet in width is being built by the State, and

narrow surfaces are being widened to 18 feet or more as rapidly as funds permit.

Revenues and Expenditures of the State Highway Department

The revenues of the State highway department since its organization as an advisory body in 1904 have been received from several sources, and statutes governing these revenues have been frequently changed. During the period when the State highway department existed in an advisory capacity only, appropriations for State aid were



Fifty-foot brick pavement on the Columbus-Delaware Road, U. S. Route 23

made from the general fund. For this purpose \$10,000 was appropriated for the fiscal year 1904-1905, \$150,000 per year during the two succeeding years and \$440,000 per year for each succeeding year to 1913.

Beginning in 1909, following the enactment of

the first automobile license law, the State-aid fund was increased by the revenues derived from motor vehicle license fees.

Since 1909 motor vehicle license fees have been used for highway purposes, but the distribution and use of such funds has undergone numerous changes. The total receipts from this source have increased from \$36,209.60 in 1908 to over \$13,000,000 in 1925. Since 1919 one-half of these revenues has been returned to the counties, and one-half retained for the State highway department.

Shortly after the duties of the highway department were enlarged to include highway construction and concurrent with the creation of the intercounty road system, a State levy for highway purposes was enacted. In 1914 a tax levy of one-half mill produced \$3,400,000. From 1915 to

Table 3—Expenditures of the Ohio State Highway Department¹ 1905-1926

Year	Total (1987)	Maintenance and repair	Construction	
			Inter-county highways	Main market highways
1905	\$460.35		\$460.35	
1906	54,545.28		54,545.28	
1907	110,064.94		110,064.94	
1908	260,394.54		260,394.54	
1909	397,924.38		397,924.38	
1910	462,792.50		462,792.50	
1911	247,916.97		247,916.97	
1912	496,496.70		496,496.70	
1913	668,220.22	\$12,038.60	656,181.62	
1914	1,489,675.88	178,394.88	843,763.42	\$467,517.58
1915	3,595,857.80	855,915.41	2,057,622.13	. 682,320.26
1916	2,779,879.66	783,003.19	1,597,758.35	399,118.12
1917	2,811,853.48	1,361,092.10	1,048,355.47	402,405.91
1918	4,040,201.77	2,236,888.49	1,065,016.26	738,297.02
1919	3,971,383.79	2,024,194.66	1,277,053.60	670.136,13
1920	5,589,970.49	3,494,277.11	1,315,842.59	779,850.79
1921	11,448,835.79	4,127,405.03	5,161,292.95	2,160,137.81
1922	7,681,709.19	2,712,898.64	4,195,914.52	772,896.03
1923	8,659,608.04	4,444,939.36	3,174,035.23	1,040,633.45
1924	11,802,207:99	6,206,136.68	4,163,114.31	1,432,957.00
1925	12,214,315.97	8,066,056.23	3,157,456.96	990,802.78
1926	16,949,950.81	12,616,635.07	3,431,025.31	902,290.43
	\$95,734,266.54	\$49,119,874.85	\$35,175,028.38	\$11,439,363.31

¹ These expenditures represent exclusively State funds. In addition to the expenditures shown there were county expenditures of \$87,000,000 and Federal-aid expenditures of \$19,000,000.

1917 the annual levy was three-tenths of a mill which produced each year from \$2,300,000 to \$2,700,000. In 1917 the levy was again increased to one-half mill, which during that year produced \$4,500,000. The State tax levy for highway purposes was abolished in 1923 and since that time highway revenues have been derived from biennial appropriations from the General Reve-



Removing snow on State Route 2

nue Fund together with income from motor vehicle license fees and, effective in 1925, from the motor vehicle fuel tax.

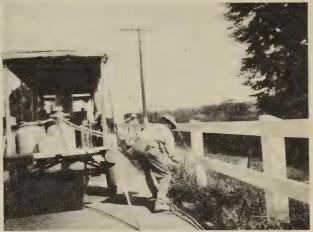
Total expenditures of State funds only by the State highway department from 1905 to December 31, 1926, including expenditures for State aid, construction, maintenance, and repairs, are approximately \$96,000,000. Beginning in 1913 a special fund was established for maintenance and repair, and beginning in 1915 special funds were also established for construction on the intercounty highway system and the main market road system. Total expenditures of State funds by years are shown in Table 3.

Expenditures on the State highway system for construction, maintenance and repair for the period 1904 to 1926, inclusive, total approximately \$202,000,000, of which \$96,000,000 was expended by the State, \$87,000,000 by the counties and \$19,000,000 by the Federal Government. Of this sum \$148,000,000 has been expended for construction of highways and \$54,000,000 for maintenance.

Of the State funds approximately \$49,000,000 have been expended for maintenance. Maintenance expenditures from county funds have been



A 9-foot brick pavement on State Route 6 widened temporarily with cinders and gravel



Painting guard rail with spray machine on State Route 53 small, totaling approximately \$5,000,000 for the entire period, and Federal-aid funds are expendable exclusively for construction of highways.

Status of State and County Cooperation Prior to 1927

Improvements of the inter-county highway system are made on the State-aid basis. All construction in which the State participates is carried on by the Department of Highways, but the initiation of each project rests with the county commissioners. The annual program for each county is formulated by mutual agreement between the Director of Highways and Public Works and the county commissioners. Three-fourths of the biennial appropriations made by the legislature to the inter-county highway improvement fund are distributed equally among the 88 counties of the State and one-fourth is spent at the discretion of the Director on the main market inter-county highways. When petitions for improvements in

any county have been made by the county commissioners, the State is authorized to pay 60 per cent of the improvement cost provided the funds available for improvements in such county are sufficient. If State funds are not sufficient to cover 60 per cent of the cost of the proposed improvements, or for any other reason, the State may pay such proportion of the costs as may be agreed upon by the Director of Highways and the county commissioners or township trustees.

In counties in which the aggregate of the tax duplicate for real estate and personal property is less than \$22,000,000 and in which there are at least 700 miles of public highways, the Director of Highways may, by agreement with the county commissioners, pay not to exceed 90 per cent of the cost of the proposed improvement. In counties having a tax duplicate for real estate and personal property of between \$22,000,000 and \$30,000,000, and having at least 700 miles of public highway, the Director of Highways may, by agreement with the county commissioners, pay not to exceed 75 per cent of the cost of the proposed improvement. The cost of improvements as described above includes all costs of highway construction, but does not include costs of additional right of way, which must be provided by the county.

The county's share of the construction costs may be distributed between the county, townships and adjacent property owners.

The counties may construct or improve an inter-county highway wholly with their own funds. In such cases plans and specifications must be approved by the Director of Highways and must conform to the specifications and standards adopted by the State department of highways for main market and inter-county highways. Appropriations for the improvement of the main market roads are established as a separate fund. and are expended under the supervision of the Director of Highways. He is authorized to use these funds in the improvement of any part of the main market road system which he may deem necessary without restrictions as to county or section of the State. Such improvements may be initiated by the Director of Highways or by the counties and may be completed wholly with State funds or with the cooperation of counties or local subdivisions for the entire project or for any part of the project.

The department of highways maintains the inter-county highway system after such roads are taken over by the State. The gasoline tax law of 1925 authorized the department of highways, as soon as practicable, to take over for maintenance all mileage of the inter-county highway system outside of incorporated municipalities.

Present statutes provide for complete control of the maintenance of the entire inter-county highway system and complete control of construction on the main market system by the State department of highways. As a matter of fact, however, the same policies as to county cooperation have been followed on the main market roads as on other inter-county highways. On that part of the inter-county highway system which is not included in the main market road system, the State pays the major part of construction costs, but the initiation of improvements must come from the local units, thus limiting the powers of the State in developing a continuous system of highway improvements.

Organization of Division of Highways

The Division of Highways is the principal part of the Department of Highways and Public Works and is under the direction of G. F. Schlesinger, Director of Highways and Public Works appointed by the Governor.

The Director has supervision of and is responsible for the activities of the Division of Highways, including construction, maintenance and regulation of the main market and inter-county highways, and assistance to counties and local subdivisions in the selection of county highway systems.

The State highway engineer, H. J. Kirk, is the chief executive of the Division of Highways and is appointed by the Director. Under the general supervision of the Director, he has charge of all engineering work of the division and general supervision over the administrative bureaus and sections of the department and the field forces.

The functional organization of the Division of Highways, headquarters and field forces, is shown

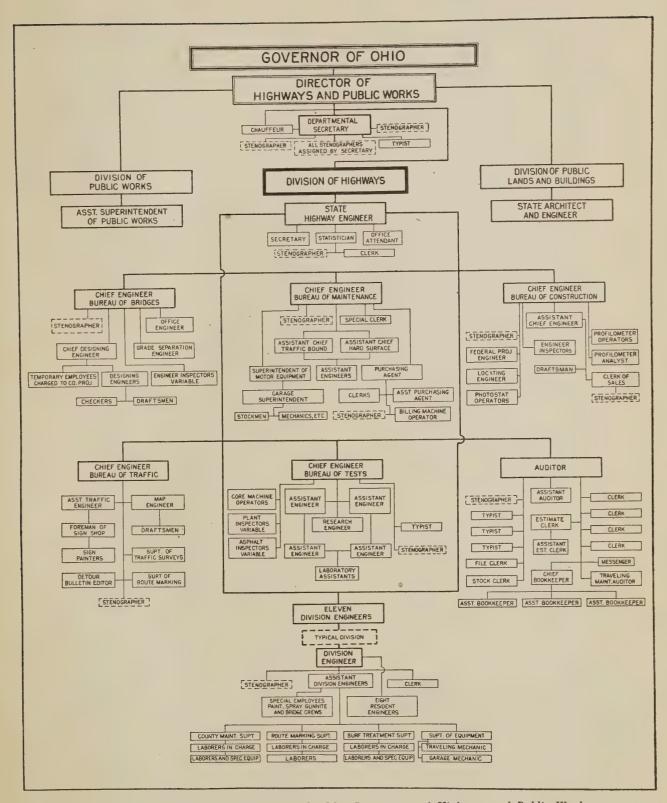


Fig. 5-Chart of the Organization of the Ohio Department of Highways and Public Works

in Figure 5. The headquarters organization is divided into three major bureaus—construction, maintenance, and bridges, and two minor bureaus—tests and traffic, each in charge of a chief engineer of bureau. These five chief engineers of bureaus, together with the auditor, are assistants to the State highway engineer.

The chief engineer of the bureau of construction has charge of all matters pertaining to road construction and improvement. He has general supervision over the preparation of plans, specifications, and estimates for construction on the main market and inter-county highways.

The chief engineer of the bureau of bridges is responsible for bridges, structures, drainage and grade crossing elimination on the main market and inter-county highways. He also serves in an advisory capacity for similar construction on the county and township roads on projects estimated to exceed a cost of \$10,000 when so requested by the minor subdivisions of the State.

The chief engineer of the bureau of maintenance is in charge of the maintenance and repair of main market and inter-county highways. The purchasing agent, through whom all purchases for the entire Division of Highways are made, is included in the Bureau of Maintenance.

The chief engineer of the bureau of tests has charge of the State testing laboratory, tests construction and maintenance materials, carries on research as to the use and testing of various materials, and prepares specifications for all classes of materials used in construction and maintenance.

The chief engineer of the bureau of traffic is responsible for route marking and signing, preparation and publication of maps, distribution of



Typical pavement marking at a railroad grade crossing



Typical road signs and markers

information regarding condition of routes, and traffic studies.

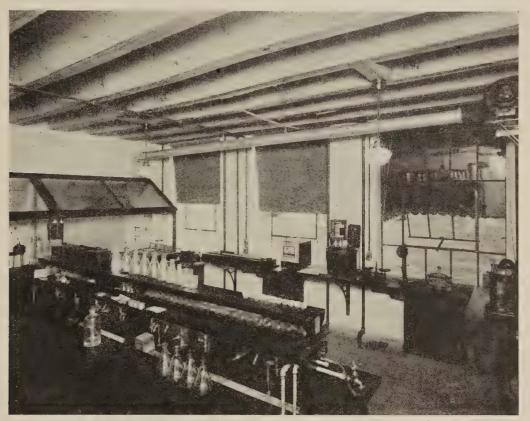
The auditor supervises the bookkeeping of the Division of Highways, prescribes the required system of accounting for the Division, and audits all bills paid from funds of the Division.

The field forces are organized in eleven divisions, each in charge of a division engineer under the supervision of the State highway engineer. Each division includes eight counties and all are similar in organization.

Under such regulations as the State highway engineer may prescribe the division engineer is authorized to act for the State highway engineer in all matters arising in the division to which he is assigned. He has charge of construction, maintenance and inspection of all work performed in his division on the main market and intercounty highways. Assisting the division engineers in each division, there are assistant division engineers and eight resident engineers—one in each county of the division. The resident engineers in most cases are the county engineer or county surveyor. Surveys, plans and estimates for construction projects in the county are pre-

pared by the resident engineer and submitted to the Director of Highways through the division engineer and the State highway engineer. Inspectors are assigned to each construction project in progress by the division engineers, to inspect construction methods and workmanship and quality and quantity of materials used. Maintenance work is in charge of an assistant division engineer in each division and is directed by a maintenance superintendent in each county. Each division also employs a superintendent of route mile shall be done by contract and less expensive projects may also be let as contract work. It has been the policy of the Department to use the contract method wherever practicable, but many maintenance operations are not well adapted to performance by contract, and on this account the maintenance of the main market and inter-county highways has been carried on largely on a force-account basis.

The main market and inter-county highways have been completely equipped with route mark-



The Bituminous Laboratory of the Department of Highways and Public Works

marking, a superintendent of surface-treatment work, and a superintendent of equipment.

The personnel of the division forces engaged in construction, maintenance, and route marking are under the general supervision of the respective bureaus of the headquarters organization.

Construction on the main market and intercounty highways is carried on almost exclusively by contract work. Bridges and structures are also in most cases built by contract.

The statutes require that all maintenance projects estimated to cost in excess of \$3,000 per

ers and directional signs under the supervision of the bureau of traffic.

All State routes are designated by numbers and are completely marked with these numbers. Changes in direction are indicated and necessary warning signs installed. Railroad grade crossings are marked by a series of transverse bands painted on the pavement. Detours are marked by standard signs.

The bureau of tests has made exhaustive studies of the quality of road building materials in the State through its tests of material samples.

THE TRAFFIC SURVEY

HE purpose and justification of highway development and the expenditure of public funds for highway improvement is the production of highway transportation service. During the past two decades the demand for highway service has been rapidly increasing. Motor-vehicle registration in Ohio has increased from a few thousand vehicles in 1905 to 1,346,400 in 1925, with an increase of over 640 per cent during the period from 1915 to 1925. To meet the ever-increasing demands for highway service public funds, under the supervision of the State, have been expended on the State highway system, during the period 1905 to 1926, to the amount of \$202,000,000.

The public business of providing highway service through the development of highway systems has become an industry of the first rank. Successful management of this public industry, fundamentally similar to the management of a private business, requires (1) sound analysis of the demand for the product, (2) efficient production methods, and (3) proper financing of the business. Failure to deal properly with any one of these three phases of the business results in the uneconomic expenditure of public funds and unjust burdening of the tax payers.

The fundamental purpose of traffic or highway transportation research is to provide for the highway executive an accurate and reliable analysis of the demand for highway service. Progress in highway development can not be measured merely in terms of miles of highway construction or of millions of dollars expended. The true measure is the degree to which efficient highway transportation service is provided with available revenues, labor, equipment and materials.

The demands for highway service can be measured only by an accurate and comprehensive study of present traffic, its volume and type, leading to an estimate of the future volume and character of traffic on the highway system and the individual routes.

The Ohio traffic survey was undertaken for the purpose of providing such accurate knowledge of traffic on the highways of the State and of

translating this knowledge of present and expected future traffic into a plan of highway development which would satisfactorily and economically meet traffic requirements on the State highways.

To accomplish this purpose the following specific information has been provided:

- I. The relative traffic importance of the State, county and township highway systems, as a basis for the distribution of public funds among these systems.
- 2. Classification of routes of the State highway system on the basis of present and expected future traffic, the volume and characteristics of such traffic involving, (a) average daily, maximum and expected future total traffic and truck traffic, (b) present and expected future number of small, medium and large-capacity trucks, (c) present and expected future number and frequency of heavy gross loads and wheel loads, and (d) present and expected future special traffic movement.
- 3. Establishment of a plan of highway improvement for a period of several years based on the traffic classification of highways. Design requirements and selection of types of highway construction will vary with physical and climatic conditions and traffic. The plan of highway development as established proposes the construction of such highway surfaces as will, under existing physical and climatic conditions, serve the expected traffic on the route during the major part of the life of the improvement.

The Methods of the Survey

The traffic survey, cooperatively conducted by the Bureau of Public Roads, United States Department of Agriculture and the Ohio Department of Highways and Public Works, was begun in December, 1924, and continued for a period of one year. During the survey, traffic data were recorded at 1,158 points on Ohio highways as shown in Figure 6. At 358 of these points complete data were recorded one day each month during the year period. At the remaining 800 points counts of passenger cars and motor trucks were obtained on three days during the summer months. Data

modity carried, and tire equipment. At alternate operations at 156 stations, total gross and rear-axle weights were measured by means of portable scales. Passenger-car data included State of registration, place of ownership, purpose of trip, origin, destination and number of passengers.



A typical traffic survey station

obtained at these stations included a count of passenger cars, motor trucks, motor busses, horse-drawn vehicles, foreign vehicles, and detailed truck and passenger car data. Motor-truck data included the capacity of the truck, State of registration, place of ownership, origin, destination, type of origin and destination, com-

Each operation consisted of a ten-hour observation period, alternating between 6 A. M. to 4 P. M. and 10 A. M. to 8 P. M. Special observers tabulated traffic between 8 P. M. and 6 A. M. at selected stations. Complete 24-hour observations were therefore available at these stations which were made the basis of computation of

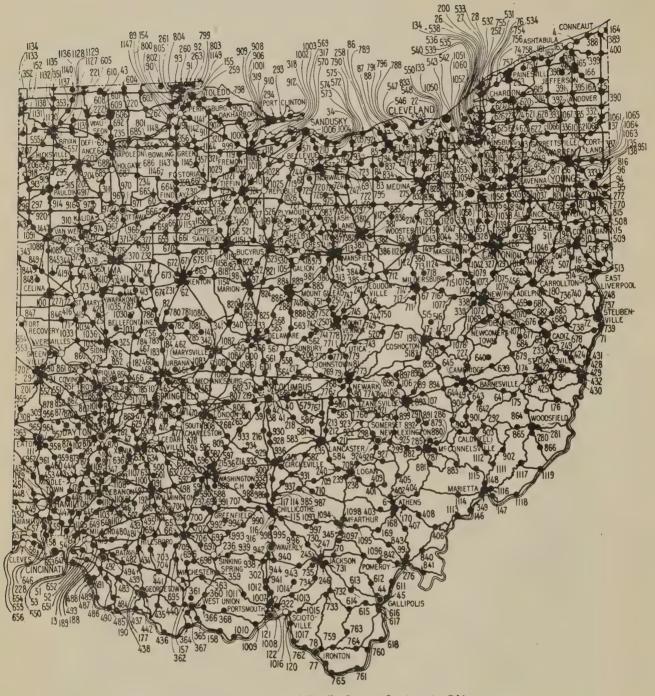


Fig. 6-Location of Traffic Survey Stations in Ohio

hourly variations in traffic and of average daily traffic at all stations. Traffic observations for week periods were also made at selected stations to determine variations in traffic by days of the week. Seasonal variations were computed from the monthly operations at all stations. Stations were operated on a carefully planned schedule which permitted operations on the various days of the

week and prevented duplicate recording of traffic.

Traffic was observed on practically all sections of the State highway system and stations were so located as to enable close observation of the variations in traffic on various routes and sections of routes. Stations were also located on representative sections of the county and township highway systems in all sections of the State.

DENSITY OF TRAFFIC

HERE are in Ohio approximately 84,884 miles of rural highway, of which, on January 1, 1926, 11,000 miles were intercounty highways, constituting the State highway system. Of the remaining 73,884 miles, 22,991 were included in the county system, and 50,893 were township roads. Federal-aid highways included in the State highway system aggregated 5,899 miles, and the main market road system 3,486 miles.

Upon the 84,884 miles it is estimated that in 1925 there was a motor vehicle movement of approximately 3,746,360,000 vehicle-miles.¹ The relative importance of the State highway system is indicated by the fact that although it includes but 13.0 per cent of the entire rural road mileage, it carried 2,160,435,000 vehicle-miles, or 57.7 per cent of the total motor vehicle traffic during 1925. The average daily motor vehicle traffic upon the State highway system is over nine times that upon the county and township roads.

The daily volume of traffic on different parts of the State highway system varies widely. The number of motor vehicles per average twenty-four hour day varied from 5,583 on Route U. S. 30 between Canton and Massillon to a minimum of less

than 20 vehicles on several unimproved sections. The State highway system includes 4,180 miles on which the average daily motor vehicle traffic was less than 200 vehicles. County and town roads include a considerable mileage on which the average daily traffic was less than 5 vehicles per day.

Highway traffic is almost exclusively motor vehicle traffic. During 1925 the density of horse-drawn vehicles was recorded at all survey stations, but it was early apparent that their numbers were so few as to warrant no consideration in highway planning. The average traffic of horse-drawn vehicles on State highways is less than 7 per day.

Motor bus traffic is important on several of the State routes. It is, however, a specialized movement, and its volume on any highway is the product of several factors which have little effect upon other motor vehicle traffic. Motor bus traffic is, therefore, discussed separately and motor vehicle traffic as discussed in this report refers only to passenger cars and motor trucks.

Appendix III shows the traffic density at each of the 1,158 points where traffic was observed during the survey,² and shows also, by counties, the routes upon which traffic was observed, the

¹ In this report certain terms, frequently used, have invariably the same meaning. These terms and their definitions are as follows:

Vehicles refers only to motor vehicles (passenger cars and trucks) exclusive of horse-drawn conveyances.

Traffic is defined as the movement to and fro of vehicles over a highway.

Density of traffic is defined as the number of motor vehicles passing any given point on a highway in a unit of time. For example, on Route U. S. 30 between Massillon and Canton the average daily density of traffic was 5,583 vehicles, which means that during an average 24-hour period 5,583 vehicles passed any given point on this five miles of highway. Unless a different unit of time is specifically stated density of traffic refers to the number of vehicles passing any given point on a highway during a day of 24 hours.

The accuracy of the determination of density of traffic is influenced by the distance between the survey stations. Exactness of method would require a density record for each point on the highway system where traffic varies. The cost involved in proportion to the relatively small gain in accuracy does not justify location of traffic observation points at close intervals. The density computed for each station on the Ohio highway system is applied to the short sections of highway reasonably adjacent to each station on which there is but little variation in

Daily refers to a day of 24 hours.

Vehicle-mile is defined as the movement of a motor vehicle one mile.

Average daily vehicle-mileage on the highway system is calculated by multiplying the average daily density of traffic (vehicle-miles per mile of highway is numerically equivalent to the average density of traffic on a mile of highway) on each section of highway, by the highway mileage of each section, and adding the products.

Vehicle-miles per mile is defined as the sum of the mileage traveled by all motor vehicles in passing over one mile of highway. It is numerically equal to the average density of traffic on one mile of highway.

Ton-mile is defined as the movement of a ton one mile. Net tonnage refers to the net weight of the motor truck cargo.

Gross tonnage or gross load refers to the weight of the motor truck cargo and vehicle.

Foreign traffic represents vehicles having other than Ohio State license tags. Foreign vehicle-mileage is calculated by applying the percentage of foreign vehicles at each station to the total vehicle-mileage on the sections of highway adjacent to each station and adding to obtain the total foreign vehicle-mileage. Similar procedure is used in calculation of farm and city, business and non-business and touring traffic, and trucking for hire.

hire.

² The location of each traffic station is shown on Figure 6.

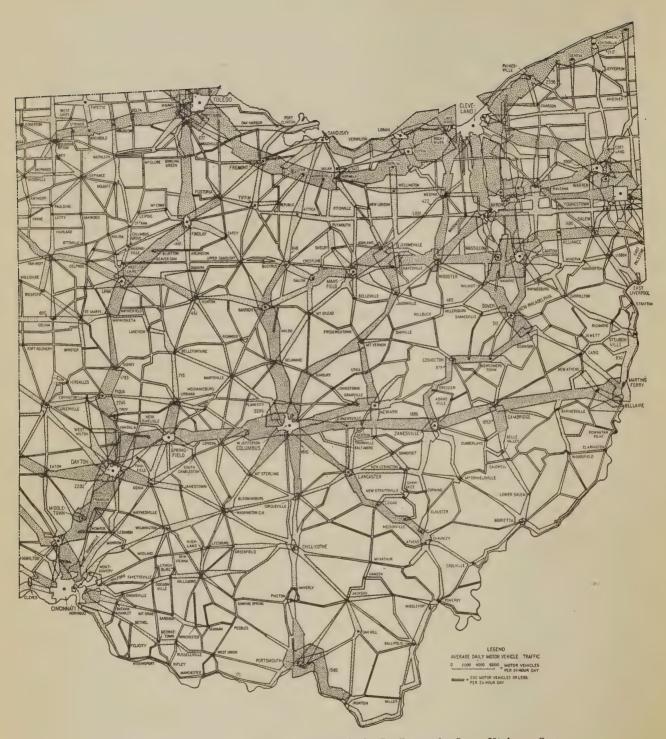
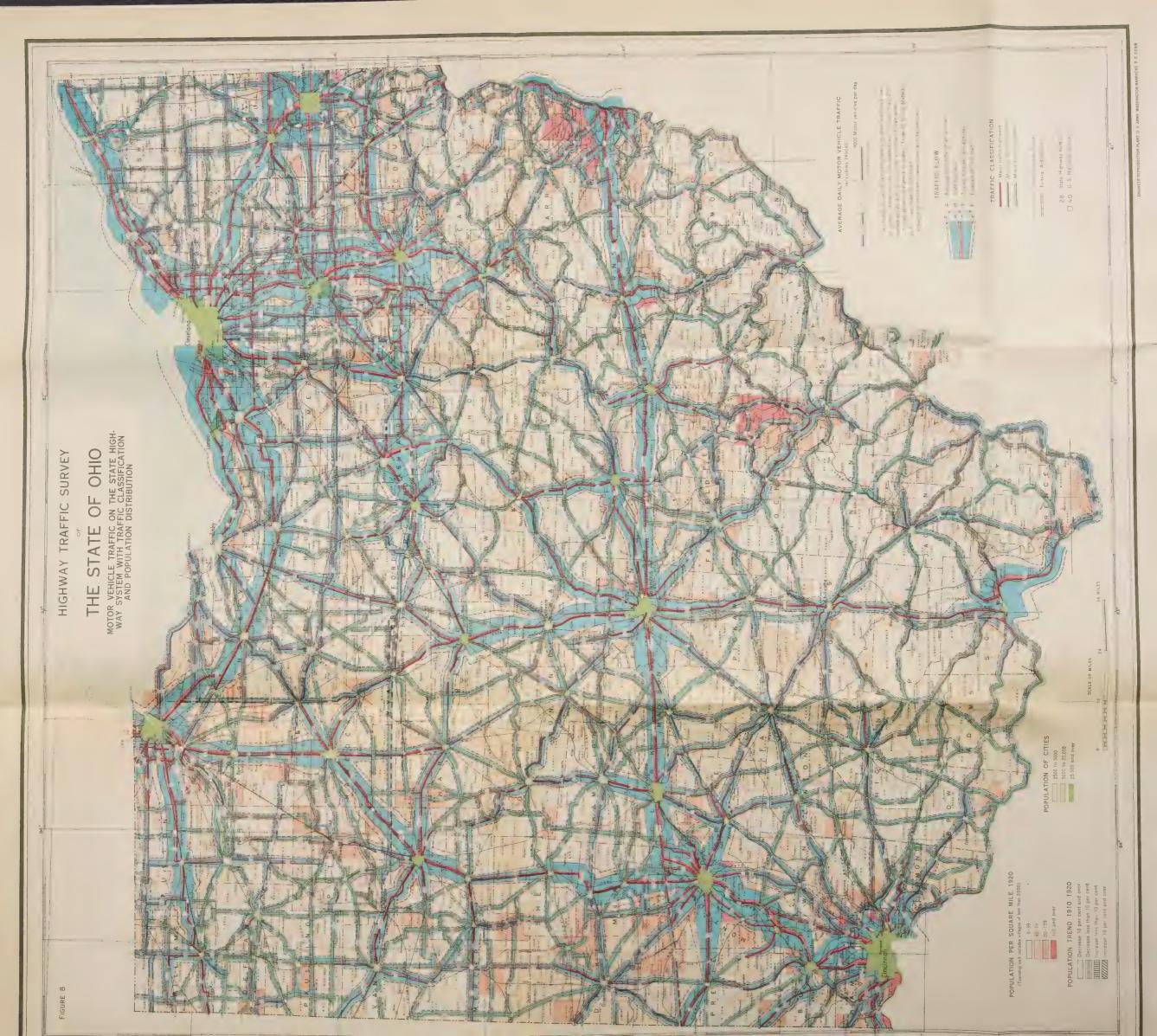
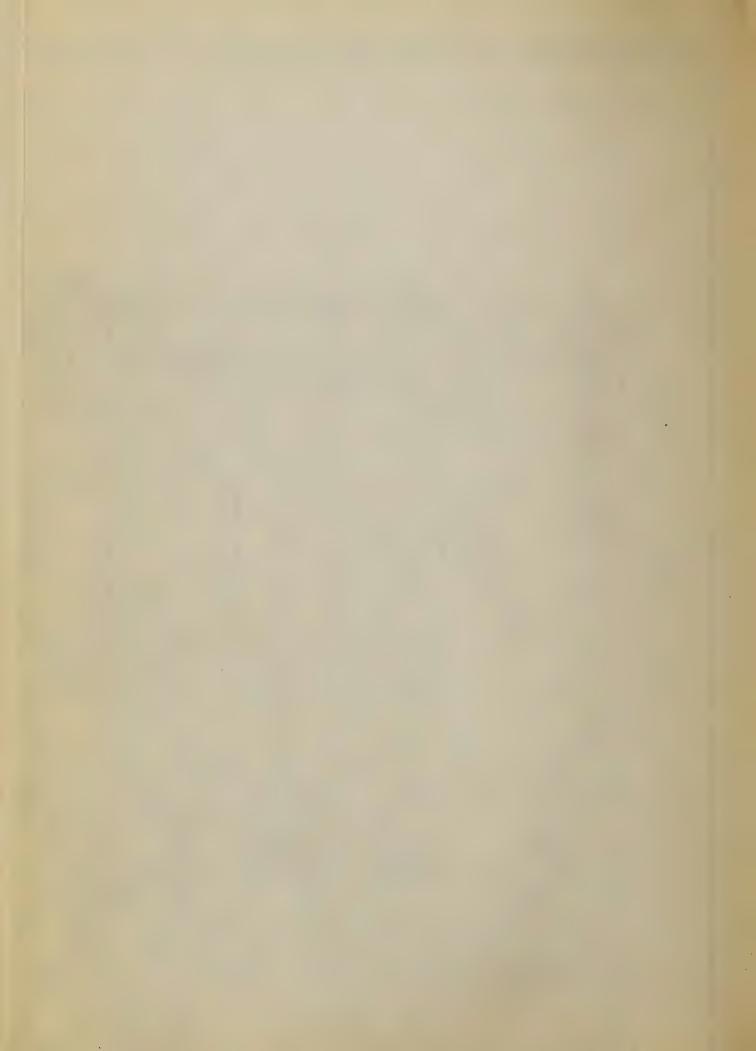


Fig. 7-Average Daily Density of Motor Vehicle Traffic on the State Highway System





average density of motor vehicle traffic for a 24-hour day, the average daily density of motor truck traffic, the normal maximum traffic, and the estimated traffic for 1930.

The average daily distribution of total traffic on the State highway system is shown in Figure 7. The more important traffic routes of the State are apparent.

The basic traffic map of the report, Figure 8, shows the distribution of passenger car and motor truck traffic on each section of the State highway system, estimated 1930 traffic, the traffic classification of each section of highway, and the density and trend of population by townships.³

Principal Traffic Routes

The largest volume of traffic of both passenger cars and trucks is found in the areas adjacent to large centers of urban population and on the main through routes. The concentration of traffic in the areas immediately adjacent to the larger cities of the State is apparent. The principal through routes are also clearly evident as broad bands serving wide areas in the State and connecting the important cities of Ohio and nearby States. The traffic importance of these principal routes is the result of local traffic of the area augmented by the traffic moving between larger centers of population. Among the more important of the through routes are the following: The Buffalo-Chicago Highway, crossing Ohio near its northern border, connecting the Buffalo and Erie territory with Cleveland and surrounding cities, Toledo and other points in Ohio, and cities in Indiana, Michigan and Illinois; the National Pike from Bridgeport through Zanesville, Columbus,

Springfield and Dayton,4 and connecting Wheeling and eastern points with central Ohio cities and cities in Indiana, Illinois, and points west: the Lincoln-Harding Highway (route U. S. 30) through Canton, Mansfield, Marion and Lima, connecting Pittsburgh and Pennsylvania cities with the above cities in Ohio and with Indiana and Illinois cities to the west. Crossing the State in a north-and-south direction are the Dixie Highway, from Toledo through Dayton to Cincinnati, connecting Detroit and other Michigan cities with areas south of Ohio; the Scioto Trail, from Sandusky via Marion and Columbus to Portsmouth; the Cincinnati-Cleveland (the "C. C. C.") Highway; and the Cleveland-Marietta Highway, via Akron, Canton, New Philadelphia and Cambridge.

The principal through routes coincide in general with the routes adopted for uniform marking by the American Association of State Highway Officials in November, 1926, referred to as U. S. routes, of which the most important east and west are U. S. 20, 30, 40, and 50, and the most important north and south are U. S. 21, 23 and 25.

Route U. S. 20 from the Pennsylvania line follows the Buffalo-Chicago Highway west through Ashtabula, Cleveland, Elyria, Norwalk and Fremont. A few miles west of Fremont it diverges from the present heavily-traveled route and continues through Perrysburg and Maumee rather than Toledo, thence north, crossing State Route 2 (the present principal traffic route) and west to the Indiana line over a route at present carrying very light traffic. From Conneaut to Fremont, traffic on this route averages 2,447 vehicles per day, from Maumee to the Indiana line but 297. When proposed improvements on this portion of Route U. S. 20 are completed, through traffic will to a larger extent use this route in preference to Route 2.

Route U. S. 30 follows the Lincoln and Harding Highways across the State, from East Liverpool through Lisbon, Canton, Mansfield, Marion, Lima and Van Wert. This route is already an important cross-state route, although east of Canton through traffic has followed the route via Salem and East Palestine rather than the route via Lisbon and East Liverpool, as the former provided a more completely improved route to Pittsburgh.

³ During 1925 there were sections of highway under construction, and as a result there was some interference with normal traffic movement. On highways where detours were in effect for a period of several months, the resulting traffic, as shown in Figures 7 and 8, will be below normal traffic for the route. Where detours were in effect for only short periods, the effect of such detours on average annual traffic was negligible. The lack of improvement on certain sections also results in variations from normal traffic on these and adjacent alternate routes. In so far as possible, adjustments for such variations have been made in the traffic classification of routes or sections of routes shown in Figures 8 and 33 and Appendix XIII.

⁴ The National Pike is routed north of Dayton, but due to the condition of sections of this route west of Brandt, traffic on the route passes through Dayton.

Average traffic for the entire length of Route U. S. 30 is 1,071 vehicles per day.

Route U. S. 40, the National Pike, from Wheeling, W. Va., passes almost due west through Zanesvilles, Columbus and Springfield to the Indiana line. The western end of the route is unimproved at present, with the result that through traffic detours via Dayton and Eaton. Improvement of less than 20 miles in Preble County will open Route U. S. 40 as a direct bypass for through traffic north of Dayton. Traffic in 1925 averaged 1,749 vehicles per day on the 159 miles from Brandt east to the Pennsylvania line.

Route U. S. 50 crosses the State from Belpre via Athens, McArthur, Chillicothe, Hillsboro and Cincinnati to the Indiana line, and is one of the less important U. S. routes, averaging but 452 vehicles per day. It passes through few large centers of population, and for much of its length is surfaced with gravel.

Route U. S. 25, the Dixie Highway, from the Michigan line north of Toledo to Cincinnati, is the most important north and south through route, and is paved throughout practically its whole length. South of Franklin, in Warren and Butler Counties, the new route follows the most direct course between Dayton and Cincinnati. For 136 miles north of Franklin the average traffic is 1,743 vehicles per day.

Route U. S. 23 crosses the State from the Michigan line, north of Toledo, to Portsmouth, via Fostoria, Marion, Columbus and Circleville. South of Marion it follows the Scioto Trial. On account of the relative lack of improvement in its northern portion, as compared with the Dixie Highway to Findlay, the traffic north of Carey is very light. Between Marion and Columbus traffic averaged 2,160 and between Columbus and Portsmouth 978 vehicles per day.

Route U. S. 21 from Cleveland to Marietta coincides with the old Cleveland-Marietta highway south of Newcomerstown, and is located west of Canton and Akron to avoid the congested urban traffic of this area.

The system of numbered U. S. Highways in Ohio, when improved, will form a well-balanced network of the more important through-traffic highways of the State. Many of these routes will

serve a large volume of local traffic. The total traffic on each route will depend very largely upon the population and development of the immediate areas which it traverses, and traffic upon those routes which pass through the sparsely populated sections of the State will continue to be small as compared with those routes which connect the important sources of local traffic.

Of the 11,000 miles of the State highway system, 131 miles, or 1.2 per cent of the total mileage, carried 2,500 or more motor vehicles per day in 1925; 858 miles, 7.8 per cent of the system, carried 1,500 or more vehicles per day; 3,239 miles, approximately 30 per cent of the total, carried 600 or more vehicles per day; and 7,761 miles, 70.6 per cent, carried less than 600 vehicles per day, of which 4,180 miles carried less than 200 vehicles per day, as shown in Figure 9.

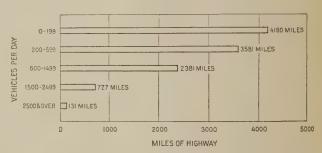


Fig. 9—Mileage of State Highways by Traffic Density Classes

The routes carrying the largest daily volume of traffic are, with few exceptions, in the north-eastern, northern and southwestern parts of the State, and the routes of least traffic importance are in the southeastern and northwestern sections.

On the basis of traffic, the State is divided into five separate traffic sections somewhat comparable with the distribution of population and industry, each of these sections being subdivided in the order of their traffic importance, into two or more divisions, as shown in Figure 10.

The most important of these sections lies in the northeastern part of the State, and includes: In Division A, the counties of Cuyahoga, Lake, Lorain, Mahoning, Portage, Stark, Summit, Trumbull and Wayne; Division B, Ashland, Erie, Fulton, Huron, Lucas, Ottawa, Richland, Sandusky, and Wood Counties; and Division C, Ashtabula, Geauga and Medina Counties. This is the area of densest population and greatest in-



It will be seen from Appendix IV that practically all the routes carrying heavy traffic are adjacent to or connect the larger cities of Cleveland, Toledo, Akron, Youngstown and Canton in the northeastern section. The influence of the volume of through traffic added to the large volume of local traffic on the principal through routes is evidenced by Route U. S. 20, which carries over 1,500 vehicles per day throughout its entire length from the Pennsylvania State line to its junction with Route 102 west of Fremont, except for a short distance near Norwalk, and by U. S. 25, which carries over 1,500 vehicles throughout its entire length.

In the southwestern section the same conditions are evident. Only on sections of routes adjacent to Cincinnati, Dayton and Springfield and on the principal through routes—the Dixie Highway and the National Pike—is the average traffic density in excess of 1,500 vehicles per day.

In the east-central section routes carrying over 1,500 vehicles per day are limited almost exclusively to sections of Route U. S. 40 and parts of U. S. 21 and Route 8 adjacent to the larger cities. The only sections serving over 1,500 vehicles daily and not included in these routes are three short sections, two at Bellaire and one at Zanesville.

In the northwestern section routes carrying over 1,500 vehicles per day are largely limited to those radiating from Columbus and sections of U. S. 23, 25, 30, and 40, the most important through routes. Other routes in this class are a short section of Route 16 west of Newark, a section of Route 3 southwest of Mount Vernon, a section of Route 53 south of Urbana and a section of Route 11 in Preble County, which is a part of the western detour route of the National Pike.

In the southern section 16 of the 23 miles carrying a daily traffic of over 1,500 vehicles are near Portsmouth, 3 miles in Warren County form a portion of the through route from Dayton to Cincinnati, and the other 4 miles are very short sections at Milford, Athens, and Marietta.

The sections of highway carrying between 600 and 1,500 vehicles exhibit the same general tendency to center about the cities as those carrying over 1,500 per day. The sections of lesser traffic density are found at some distance from the

cities on main routes which, near the city lines, carry more than 1,500 vehicles; on routes of lesser importance near the larger cities; and on routes radiating from the smaller cities.

In the northeastern and the southwestern sections of the State the routes carrying 600 or more vehicles per day include almost half the total mileage in the sections.

In the east-central section the inclusion of routes carrying from 600 to 1,500 vehicles with those carrying over 1,500 completes the through traffic routes such as U. S. 40 and U. S. 21 and adds a larger number of routes radiating from Zanesville, Cambridge, Bellaire, Coshocton, Newcomerstown, Uhrichsville, New Philadelphia, East Liverpool and Steubenville.

In the northwestern section, also, the routes carrying from 600 to 1,500 vehicles per day complete the through routes such as U. S. 23, 25, and 30 and Route 2, and serve to connect the more important cities in the area, as well as to form a series of short sections radiating from the more important cities. Over two-thirds of the State highway mileage in this section, however, has a daily traffic of less than 600 vehicles.

In the southern area sections of highways carrying from 600 to 1,500 vehicles per day comprise only 15.0 per cent of the State highway mileage in the area; and this relatively small percentage serves the more important cities.

The sections of highway listed in Appendix IV are all to be regarded as important routes. Of almost equal significance for present and future planning, construction, and maintenance is the mileage with traffic ranging between 600 and 1,500 motor vehicles per day listed in Appendix V. The traffic they must carry is increasing rapidly, and it will be only a few years before they will become heavy-traffic routes.

Traffic is increasing in all sections of the State but the increase is least rapid, both in volume and rate of increase, in the southern and northwestern areas, the sections which now have the smallest relative mileage of heavy-traffic routes and the largest mileage of low-traffic routes. In the northeastern section over 40 per cent, and in the southwestern section almost an equal percentage of the routes now carrying between 600 and 1,500 vehicles will, by 1930, carry over 1,500 vehicles

per day. In the east-central section the corresponding proportion is nearly 30 per cent, in the northwestern approximately 25 per cent, and in the southern only 14 per cent.

The Importance of Urban Traffic

The importance of urban traffic on State highways is evidenced by the grouping of the heavytraffic routes about the larger cities.

A further indication of the effect of urban population upon the traffic on the State highway system is given by Table 5, which shows the average daily total passenger-car and motor-truck traffic, on the highways entering cities of various sizes, and the average traffic for each route.

The relation between population and motor-vehicle traffic per route is apparent. The variation by individual routes, however, is large, depending upon the condition of the route, the population of the area served by the route, and the presence or absence of through traffic.

For the smaller cities, particularly those not far distant from a large city, a considerable proportion, and in some cases the major part of the traffic, may be through traffic which has no relation to the size of the city through which it passes.

Table 5-Average Daily Traffic on State Highways Entering Ohio Cities of Various Size

		Average daily traffic					
Population of cities, 1920	Number of cities	A11 v	ehicles	Motor trucks			
		Per city	Per route	Per city	Per route		
Over 100,000	7	20,615	1.827	2,019	179		
50,000–100,000	2	14,296	1,682	1,345	158		
0,000- 50,000	3	7,812	1,562	670	134		
20,000- 30,000	9	5,554	1,162	502	105		
5,000- 20,000	5	5,387	998	452	84		
0,000- 15,000	9	3,928	737	357	67		
5,000- 10,000	27	3,532	658	. 289	54		

Table 6.—Average and Maximum Daily Traffic on State Highways Near the Gateways of the Larger Ohio Cities

		Average	e daily traffic	
City	Number of State routes	Motor trucks	Passenger cars and motor trucks	Maximum daily traffic
Cleveland ¹	17	2,907	32,938	75,895
Cincinnati ²	11	2,201	15,739	36,479
Toledo	10	2,254	21,612	49,941
Canton	9 •	2,053	20,050	46,462
Columbus	11	1,428	19,332	44,860
Akron	9	2,136	18,561	42,874
Dayton	12	1,688	19,972	46,160
Youngstown	9	1,518	16,153	37,507

¹ Includes East Cleveland, Lorain and incorporated suburban areas.

² Includes incorporated suburban areas, but does not include traffic crossing the Ohio River.

In Table 6 and Appendix VI is shown the traffic on State highways serving the large cities of Ohio. The average daily traffic on the State routes radiating from Cleveland, the largest city, and its suburban area is 32,938 vehicles and the daily maximum exceeds 75,000. Since the traffic observation point on several of these highways was located at some distance from the city line, the actual traffic at the city limits doubtless exceeds the traffic shown.

Traffic to and from other cities, in general, varies with the population of the cities. In the case of Toledo, the fact that its traffic exceeds that of Cincinnati is partly explained by the omission in the density as shown for the latter city of traffic crossing the Ohio River. Dayton traffic is high on account of the large volume of the through movement on Routes 25, 201 and 11. Canton also has more traffic in proportion to population than is found in the other cities listed, and in this case more than one-fourth of the total traffic recorded is found on Route U.S. 30. In addition to its through traffic this route carries at this point a heavy local movement between Canton and the neighboring industrial city of Massillon.

Variation in Traffic Density

The traffic-density data previously cited are those of an average 24-hour day throughout the year. On any particular day, or during the various seasons of the year, traffic will vary from these averages, and the average hourly, daily, and seasonal variations are shown in Figures 11, 12, and 13. Normal maximum traffic in Ohio is reached on Sundays in August, when the density is approximately 230 per cent of the On special occasions, when daily average. traffic conditions are abnormal because of fairs, football games and other events which produce exceptionally large movements, the normal maximum will be exceeded. The normal maximum traffic at each traffic survey station is shown in Appendix III.

Routes which carry an average daily traffic of over 1,500 vehicles may be expected to carry in excess of 3,400 vehicles on the day of maximum traffic, and routes carrying an average of

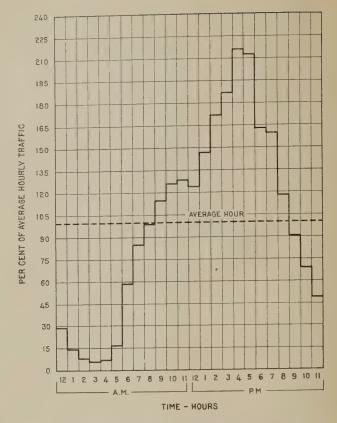


Fig. 11—Hourly Variation of Traffic Expressed as Percentage of Traffic During the Average Hour

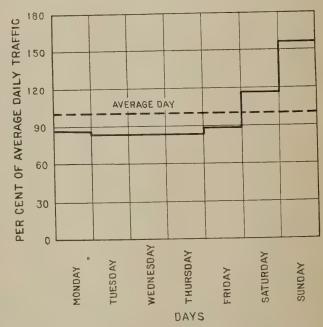


Fig. 12—Daily Variation of Traffic Expressed as Percentage of Traffic During the Average Day

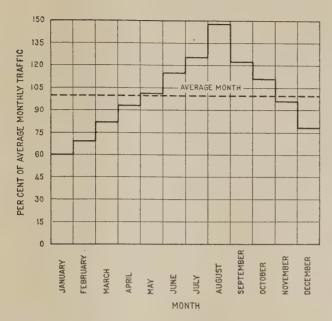


Fig. 13—Monthly Variation of Traffic Expressed as Percentage of Traffic During the Average Month

over 2,500 vehicles per day may be expected to carry a maximum traffic of over 5,700 vehicles. The volume of traffic which can be served by a route, without serious congestion, depends largely upon the hourly distribution of the traffic. Maximum traffic occurs on Sundays and a large proportion of it is concentrated during the late afternoon hours. Because of this concentration it will be necessary, in order to avoid serious congestion on certain routes which carry a large daily traffic, either to provide a surfaced way of greater width than that of the normal two-lane highway or to develop parallel routes. The mileage of such routes is comparatively small, however, and is located in the immediate vicinity of the larger cities. With these exceptions a normal two-lane highway may be expected to serve the traffic satisfactorily on all roads for a period of several years.

DENSITY OF MOTOR TRUCK TRAFFIC

ALTHOUGH motor truck traffic on the State highway system is only 9.5 per cent of total motor vehicle traffic measured in vehicle-miles, motor truck traffic is an important factor in highway traffic planning.

The average gross weight of motor trucks using the State system is over twice that of passenger cars, while maximum motor truck weights are four times the maximum weights of passenger cars. The importance of the motor truck is further emphasized by the fact that many trucks are equipped with cushion and solid tires which are much less effective in cushioning the impact of the wheels than the pneumatic tires with which the passenger cars are equipped. A study of the rear-wheel tire equipment of motor trucks using the State highway system shows that 15.0 per cent of all the trucks are equipped with solid tires and a like percentage with cushion tires; and that 95 per cent of the 3 to 7½-ton trucks are equipped with cushion or solid tires on the rear wheels.

Since motor trucks carry heavier gross loads than passenger cars, and those of the larger capacities are equipped with solid or cushion tires, and because the trucks do not have the refinements in shock-absorbing devices and spring equipment possessed by the passenger cars, the motor truck, where it forms an appreciable part of motor vehicle traffic, presents a special problem for the highway builder.

The average daily density of motor truck traffic varies greatly on different routes and in various parts of the State as shown in Figure 14. Of the 11,000 miles of State highways, 200 miles, 2.7 per cent of the total, carried in 1925, 200 or more trucks per day; 629 miles, 5.7 per cent, carried 150 or more; 1,442 miles, 13.1 per cent, carried 100 or more; 3,019 miles, 27.5 per cent, carried 60 or more; and 7,981 miles, 72.5 per cent, carried less than 60 trucks, of which 5,305 miles, 48.2 percent, carried less than 30, as shown in Figure 15. On routes carrying a small average daily truck traffic, especially those on which there are less than 30 trucks per day and many sections on which the daily density ranges from 30 to 59, the number of trucks is practically negligible in planning highway improvements. An improvement sufficient for passenger car traffic will, with but few exceptions, prove satisfactory for the

small-capacity trucks using these routes. On those routes carrying 60 or more trucks per day, and particularly the routes carrying 100 or more, the motor truck becomes an important factor in planning the improvement of the highway.

In Appendix VII are listed, according to the daily density of truck traffic in 1925, those sections which have a traffic of more than 200 trucks per day. These sections include 299 miles or 2.7 per cent of the total State highway mileage. On the basis of the traffic forecast there will be 841 miles of State road in 1930 and 1,351 miles in 1935 on which the motor truck traffic density will exceed 200 trucks per day.

U. S. Route 30, Massillon to Canton, carries on an average day a density of 485 trucks, which is the highest truck density on any section in the State. It should be noted that in the forecast for 1935 truck traffic on this route is estimated at 1,000 per day.

Appendix VIII lists the highway sections carrying from 150 to 200 trucks per day, comprising 330 miles, 3.0 per cent of the total mileage of State highways.

The more important of the five traffic sections shown in Figure 14, from the standpoint of motor truck density, are the northeastern section where the average daily density of motor truck traffic is 77, and the southwestern section with a density of 75. The corresponding density is 53 in the east-central section, and 36 in the northwestern and southern sections.

The comparative importance of the northeastern section is further emphasized by the fact that this section includes 25 per cent of the total mileage of State highways. The southwestern section, although of almost equal truck traffic density, includes only 7 per cent of the mileage of State highways. The northwestern and southern sections with a density of only 36 trucks per day include 56 per cent of the State highway mileage.

The size, location and industrial development of cities and towns determines very largely the volume of motor trucking on routes in the several sections of the State. Centers of population and industry are the main source and destination of goods transported by motor truck, and the principal trucking routes are those serving

the territory adjacent to the larger cities and those connecting centers of population.

Figure 14 clearly showns the influence of large cities on motor truck traffic. The nine largest cities in the State, in order of population, are Cleveland, Cincinnati, Toledo, Columbus Akron, Dayton, Youngstown, Canton and Springfield. Around these cities, with one or two exceptions, is found the greatest volume of motor truck traffic.

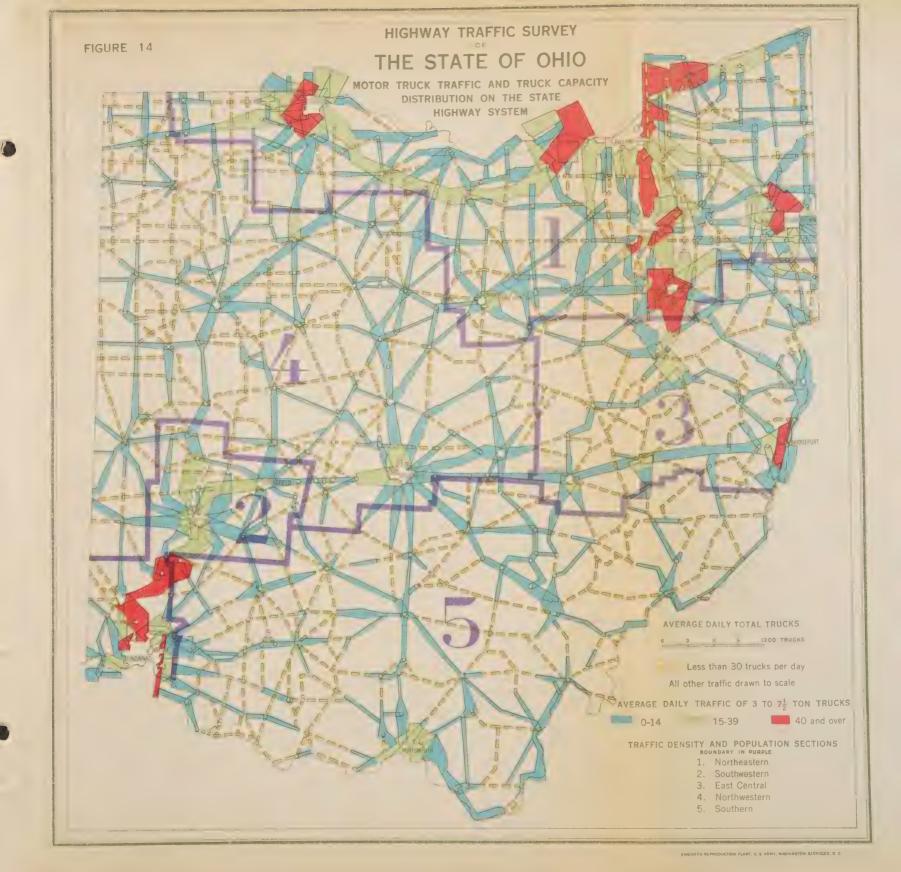
The influence of large cities upon truck traffic in the five sections of the State is shown in Table 7.

It is apparent that the high density of truck traffic on the State roads of the northeastern and southwestern sections is caused by the large cities in these areas. The two sections, which together include 30 per cent of the total area of the State, include 58 per cent of the cities of over 10,000 population. The northwestern and southern sections, the least important regions of truck traffic, contain 58 per cent of the area and include only 24 per cent of the cities of over 10,000 population.

The two most important trucking areas, the northeastern and southwestern sections, have 5 of the 7 cities between 30,000 and 100,000 population, and 6 of the 7 cities of over 100,000 population. Cleveland in the northeast and Cincinnati in the southwest are the predominating traffic influences in these two regions.

The motor truck registration per square mile, shown in Table 7, indicates the concentration of trucks in the southwestern and northeastern sections. The comparatively low registration per mile in the three remaining sections, especially in the southern section, again reflects the relatively small number of large centers of population and industry and accounts for the lower truck traffic density in these areas.

It is possible that the high density of motor truck traffic in the important traffic areas of the State will eventually present problems difficult of solution. Routes having a large number of motor trucks also carry a large number of passenger cars. On such routes, unless supplementary highway facilities are provided, serious congestion problems will develop.





On U. S. 30, from Canton to Massillon, the heaviest trucking route in the State, the average

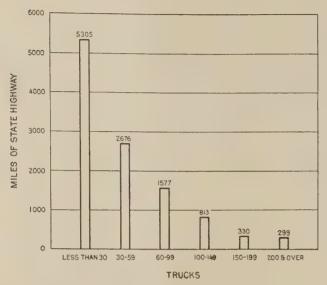


Fig. 15—Mileage of State Highways carrying various numbers of motor trucks per day

daily traffic of trucks and cars in 1925 was 485 and 5,098, respectively. It is estimated that traffic will increase to 780 and 8,190, respectively, by 1930 and to 1,000 and 10,500, respectively, by 1935.

The mileage on which serious traffic congestion may develop is not large. In 1925 there were only 15 miles of State highway on which the density of motor truck traffic exceeded 400 trucks per day and only 87 miles where the daily density was greater than 300 trucks.

The relief of congestion, which will probably result on a few sections of the State system, undoubtedly lies in increasing the width of road and creating separate lanes for truck traffic or in the construction of parallel routes. In either case the segregation of passenger car and motor truck traffic would speed up passenger car traffic and eliminate congestion caused by heavy, slow-moving vehicles.

Table 7—Average Truck Traffic Density on State Roads in the Five Traffic Sections of the State Compared with the Relative Area of the Sections, Their Truck Registration per Square Mile, and the Number of Cities Over 10,000 Population in Each

Average	Average	Percentage	Truck registration per square mile (1924)	Ci	Cities over 10,000 population by population classes ¹					
Section truck traffic density	truck traffic	of total area in the State		Total		10,000	30,000 to 100,000	Over 100,000		
		, ,	Number	Per cent	to 30,000					
Northeastern	77	24	7.9	22	44	15	3	4		
Southwestern	75	6	10.9	7	14	3	2	2		
East-central	53	12	2.5	9	18	. 9				
Northwestern	36	30	2.3	7	14	5	1	1		
Southern	, 36	28	1.3	5	10	. 4	1			
Total	51	100	3.9	50	100	36	7	. 7		

¹ United States Census of 1920.

MOTOR TRUCK CAPACITIES AND LOADING

A KNOWLEDGE of the size and weight of the motor trucks using the various routes of the State system is essential in the planning of the highway improvements. In deciding upon the design and type of betterment consideration should be given, in addition to other factors, to the number of trucks and whether the trucks using a particular route are chiefly small, pneumatic-tired vehicles or whether a considerable number of them are large and solid-tired and carry heavy loads.

The rated capacity of the trucks has been found to be a reliable criterion of the character of the truck traffic, bearing, as shown by Table 8, a close relation to the average net weight of cargo carried and also to the average gross weight of the truck when loaded. This is generally true notwithstanding the fact that average loads carried by trucks of the same capacity vary to some extent on different routes depending largely upon the type of commodities hauled.

Table 8—Average Net and Gross Weights of Motor Trucks of Various Capacities

Rated capacity	Number of loaded trucks	Average net weight of cargo	Average gross weight per loaded truck
Tons 1/2- 3/4 1 -11/2 2 21/2 3 31/6-4	12,771 27,785 5,563 4,356 2,209 2,591	Pounds 700 1,930 3,570 5,140 5,850 6,700	Pounds 3,330 5,330 10,180 13,130 14,500 16,890
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1,206 26 17	7,970 6,540 7,510	19,220 19,910 18,040

It follows, therefore, that the highway engineer, concerned with the provision of facilities for truck traffic, must attach the highest importance to the number of large-capacity trucks to be accommodated, since these are the trucks that are most likely to carry heavy gross loads. Where

large-capacity truck traffic exists, there is the greatest possibility of heavy gross loads, which are important not only because of their own weight and the fact that they are usually carried on other than pneumatic tires, but also because the percentage of the load on the rear axle increases with an increase in the gross load, as shown in Table 9

Table 9—Relation Between Gross Loading and Rear-axle Loading

Gross weight class	Average gross weight	Average rear axle weight	Proportion of gross weight on rear axle
1000 pounds	Pounds	Pounds	Per cent
Under 5	3,360	2,180	64.9
5–9	6,900	4,770	69.1
10–14	12,170	8,550	70.3
15–19	17,310	12,610	72.8
20 and over	21,980	16,430	74.7

The proportion of the total gross load on the rear axle increases with an increase in the capacity of the truck, as shown in Table 10.

Table 10-Relation Between Motor Truck Capacity and Rear-axle Loading

Capacity	Loaded trucks	Average gross weight	Average rear axle weight	Proportion of gross weight on rear axle
Tons $ \frac{1}{2} - \frac{3}{4}. $ 1 -1\frac{1}{2}. 2. 2\frac{1}{2}. 3. 3\frac{1}{2} - 4. 5 -5\frac{1}{2}. 6 -6\frac{1}{2}. 7 -7\frac{1}{2}.	Number 12,771 27,785 5,563 4,356 2,209 2,591 1,206 26 17	Pounds 3,330 5,330 10,180 13,130 14,500 16,890 19,220 19,910 18,040	Pounds 2,060 3,700 7,140 9,360 10,300 12,090 13,980 14,570 13,510	Per cent 61.9 69.4 70.1 71.3 71.0 71.6 72.7 73.2 74.9

Large-capacity loaded trucks carry heavier gross loads, and a proportionately greater percentage

of this load upon the rear axle than do small-capacity trucks. This increased concentration of weight upon the two rear wheels of the truck makes the extremely heavy gross load more dangerous.

The distribution of motor-truck traffic by capacity groups at each survey station on the roads of Ohio is shown in Appendix IX, and the gross load of trucks of each capacity class is shown for the routes on which trucks were weighed in Appendix X.

The provision of highway facilities for large-capacity trucks in Ohio is influenced by the legal maximum gross load limitation of 20,000 pounds. Considering the State highway system as a whole, there are few trucks of 6 tons capacity or larger operating on the highways; only 2.0 per cent of all trucks are of 5 to $5\frac{1}{2}$ tons capacity, and 75.3 per cent are $\frac{1}{2}$ to $\frac{1}{2}$ -ton trucks, as shown in Figure 16.

The use of trucks of 5 to $7\frac{1}{2}$ tons capacity is, to a certain extent, restricted by the gross load limitation. The light weight of a 5-ton truck

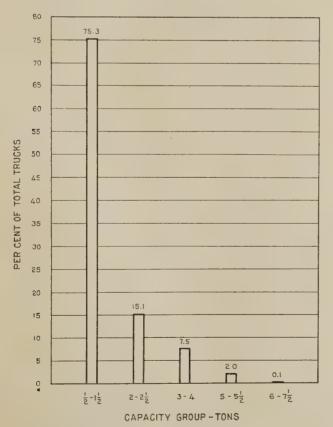


Fig. 16—Distribution of Motor Trucks by Capacity Groups

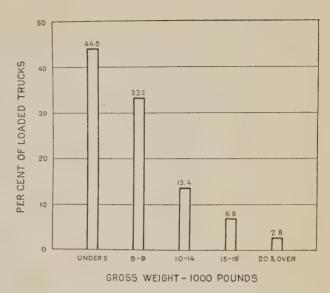


Fig. 17—Distribution of Loaded Motor Trucks by Gross
Weight Groups

averages approximately 11,250 pounds. A fiveton capacity load added to this light weight would result in a gross load of 21,250 or 1,250 pounds above the maximum permitted by law.

Of the loaded trucks weighed during the period of the survey, 2.6 per cent were carrying loads of, or in excess of, 20,000 pounds, as shown in Figure 17 and Appendix XI.

Whether any change in the legal maximum gross load limitation would increase the number of extremely large trucks is problematical. It is possible that continued use may prove that the medium-sized truck is the more satisfactory highway transportation unit, even if the gross load limit were raised.

The problem of providing highway facilities for large-capacity truck traffic under the present conditions is mainly one of constructing highways, where necessary, for trucks carrying a maximum gross weight of 20,000 pounds. A small amount of overloading must be expected and possible changes in the existing gross weight limit must also be considered.

It is found that large-capacity trucks and consequently the heavier gross loads occur in greater numbers on routes carrying a high density of truck traffic. There is, in other words, a definite relation between the average daily density of the total truck traffic and that of large-capacity trucks on the State highways, as shown in Table II.

On highway sections carrying less than 10 trucks per day, the average daily number of 3 to 7½-ton trucks is less than one. On four

Table 11—Comparison of the Density of Total Truck Traffic and that of 3 to 7½-ton Trucks

Average daily density of total truck traffic	Average daily density of 3 to 7½. ton truck traffic				
	Total	Loaded			
0- 9	1	1			
10- 19	1	1			
20- 29	1	1			
30- 39	2	1			
40- 49	. 3	2			
50- 59	5	3			
60- 69	5	3			
70- 79	6	4			
80-89	8	5			
90- 99	8	4			
100-119	10	6			
120-139	13	8			
140–159	13	9			
160-179	18	11			
180-199	28	14			
200-249	29	19			
250-299	29	18			
300-399	45	26			
400 and over	62	40			

¹ Less than one.

sections there are over 400 trucks per day; and the average density of 3 to $7\frac{1}{2}$ -ton trucks on these sections is 62, of which 40 are loaded.

Exceptions to the general rule that the number of large-capacity trucks varies with the density of the total truck traffic are accounted for largely by special movements such as the hauling of gravel, sand, and stone for construction work. These movements, produced by special local conditions, are usually short trips and are generally of short duration in any one locality.

The 711 miles of State highway which carry 15 or more 3 to 7½-ton trucks on an average day are listed in Appendix XII in order of the average daily density of their 3 to 7½-ton truck traffic. 'The majority of these trucks are of less than 5-ton capacity and very few have rated capacities of over 5 tons. For the State as a whole 79.3 per cent of the trucks in the 3 to 7½-

ton class are 3 to 4-ton trucks, 20.0 per cent are 5 to $5\frac{1}{2}$ -ton trucks, and only 0.7 per cent are over $5\frac{1}{2}$ tons in capacity rating.

The route carrying the greatest density of 3 to 7½-ton trucks is Route 8 south of Canton, on which these trucks average 70 per day as far as the junction with Route 80. There are three other sections which carry more than 50 of these large trucks a day: Route U. S. 20 from Cleveland to Elyria and from Cleveland to Painesville, and Route U. S. 422 from Cleveland to Chagrin Falls. The average daily density of the heavy truck traffic on these sections is between 53 and 55. Appendix XII shows that practically all of the routes carrying a large number of 3 to 7½-ton trucks serve the largest cities in the State,—especially Cleveland, Cincinnati, Toledo, Canton, and Youngstown.

The mileage of State highways classified by density of 3 to $7\frac{1}{2}$ -ton trucks is shown in Figure 18.

On only 0.9 per cent of the State highways is the number of 3 to $7\frac{1}{2}$ -ton trucks 40 or more per day, and on only 6.5 per cent of the system is the daily average 15 or more.

Although the use of trucks of 5-ton or greater capacity is practically negligible on the majority of the State roads there are a few routes on

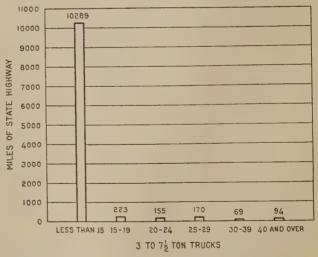


Fig. 18—Mileage of State Highways Carrying Various Numbers of 3 to 7½-ton Trucks

which they are of considerable importance. In Table 12 are listed the routes on which trucks of this size average more than 10 per day.

Six of the ten roads having more than 10 such trucks per day are in the Cleveland territory. One of the remaining four is between Akron and Canton and another between New Philadelphia

and Dennison. These eight roads are in the industrial section of the northeastern part of the State.

There are relatively few areas and sections of



A truck and trailer combination

Table 12—Sections of State Highway on Which 5-ton or Larger Trucks Exceed an Average of 10 per Day

Route	Average daily number of
Description	trucks of 5-ton or greater capacity
Cleveland-Elyria. Cleveland south. Portsmouth-Friendship. New Philadelphia-Dennison. Cleveland-Akron. Cleveland-Painesville. Akron-Canton. Cleveland-Lorain.	32 32 22 21 20 17 14
Toledo-Fremont	12
	Description Cleveland–Elyria

highway in Ohio which stand out as particularly heavy trucking areas. This is indicated by Figure 14, which shows the average daily density of total truck traffic, and also, by the colors within the truck traffic bands, shows those routes carrying between 15 and 39, and 40 or more 3 to $7\frac{1}{2}$ -ton trucks per day.

The northeastern and southwestern sections, which have already been shown to be first in importance with respect to total traffic, again take first rank in the density of their large-capacity truck traffic, as shown in Figure 19. In these sections there is a daily average traffic of nine 3 to 7½-ton trucks on the State highways, whereas the corresponding average is four in the east-central and only two in the northwestern and southern sections.

Figure 14 shows that a comparatively large number of the State highways in the northeastern and southwestern sections carry 15 or more 3 to

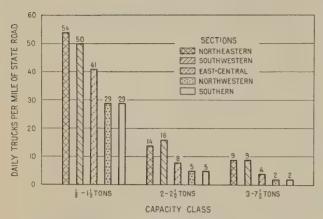


Fig. 19—Distribution of Motor Trucks by Capacity Classes in the Five Traffic Sections of the State

7½-ton trucks per day. These roads serve principally the territory adjacent to the larger centers of population, such as Cleveland, Akron, Youngstown, Toledo, Canton, Cincinnati, and Dayton. Routes connecting these cities also carry a number of 3 to 7½-ton trucks.

In the east-central section, although there is a density of 53 trucks per mile, of which four are of 3 to 7½-tons capacity, there are comparatively few roads which carry either a large total number or many large-capacity trucks. The important trucking routes in this section are Route 8 between Dennison and New Philadelphia and north toward Canton, U. S. Route 40 from Bridgeport to St. Clairsville, U. S. 21 for a few miles south of Cambridge, and Route 77 for a short distance south of Zanesville. These routes, together with a short section east of Cambridge, total approximately 42 miles. On the remaining 1,243 miles of State road in the east-central section the traffic of 3 to 7½-ton trucks is less than 15 per day.

In the northwestern and southern sections, comprising 58 per cent of the total area of the State, there are only two trucking areas which are important from the standpoint of large-capacity trucks. These areas are around Columbus in the northwestern section and Portsmouth in the southern section.

The principal trucking routes in the Columbus area are U. S. Route 40 to West Jefferson, which carries on an average day 28 trucks of 3 to 7½-tons capacity, and U. S. 23 to Worthington, on which the traffic of 3 to 7½-ton trucks is 19 per day. Of the 3,402 miles of State highway in

the northwestern section only 22 miles carry a daily traffic of 15 or more 3 to $7\frac{1}{2}$ -ton trucks.

In the southern section only two roads, U. S. 52 from Portsmouth to Friendship and the same route from Portsmouth east to Ironton, carry more than 15 trucks of 3 to $7\frac{1}{2}$ tons capacity on an average day. These two sections of road constitute only 20 miles of the total of 2,756 miles of State highway in the southern section. The greater part of the mileage in this section carries considerably less than fifteen 3 to $7\frac{1}{2}$ -ton trucks per day and in many cases none at all.

That, on the basis of gross loads, the five sections have the same relative importance is indicated by Figure 20.

For each mile of State road in the northeastern and southwestern sections there are 8 and 9 loaded trucks, respectively, which carry gross loads of 12,000 or more pounds. In the east-central section there are 3 such loaded trucks, while in the northwestern and southern sections there are only two and one, respectively. The corresponding numbers of gross loads of 20,000 or more pounds are one in the northeastern and southwestern sections and less than one in the three remaining sections. The number of loads between 16,000 and 20,000 pounds gross weight is also less than one per mile in the southern section.

The foregoing discussion of motor truck capacity and weight has been restricted to four-wheel trucks. The number of six-wheel trucks and tractors is negligible except on a few routes, and the total number of such vehicles is less than

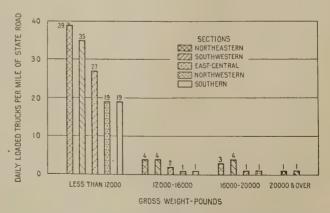


Fig. 20—Distribution of Loaded Trucks by Gross-Weight Groups in the Five Traffic Sections of the State







Pan-American highway engineers and busses in which they inspected Ohio highways in 1924

one-half of one per cent of all trucks recorded. Traffic of six-wheel trucks is most important between Akron and Cleveland. These vehicles, the average gross weight of which was 16,240 pounds, are engaged in the transportation of rubber goods from Akron to Cleveland, returning with oxygen tanks and cylinders and steel and iron products.

There are four routes in the State on which the average daily traffic of tractor-and-trailer combinations is five or more. On Routes 177 and U. S. 25, from Toledo north to the Michigan line, there are 15 and 10, respectively, and Route 8, Cleveland to Akron, and the Chicago-Buffalo Highway (U. S. Route 20 and State Route 102) between Cleveland and Toledo each carry 5 on an average day. The average gross weight of these vehicles when loaded is between 17,000 and 18,000 pounds and they haul cargoes ranging between 8,000 and 9,000 pounds. The majority of these tractors operate between Detroit, Toledo and Cleveland, hauling automobile bodies and parts.

The use of trailers attached to four-wheel trucks is greater than that of either 6-wheel trucks or tractors. On 16 routes of the State system there is an average daily movement of 5

or more trailers, and on five of these routes their number is over 10 per day. The most important of these routes is the Chicago-Buffalo Highway from Cleveland to Toledo.

The average gross weight of tractor trailers, semi-trailers, and four-wheel trailers is tabulated in Appendix X.

Motor Bus Traffic

Motor bus traffic was observed on considerably more than one-half of the State routes. The highways on which regularly scheduled bus lines operate are shown in Figure 21, and school busses, special party and tourist busses also operate at irregular intervals on these and other State routes. The number of busses operating varies from one or two small ones in areas where the demand for such transportation is small to over 100 per day on highways where the demand is large. The highways carrying a large number of motor busses daily are usually short sections connecting villages, resorts or large industrial plants with the larger cities. Bus traffic is also of considerable importance on routes connecting cities which do not have direct rail connections, and between which rail service is inadequate.

Motor bus traffic is largely limited to the State

highway system and is becoming an important part of highway traffic; on county and township roads it is of little importance. On the State highways the bus traffic was found to be 1.5 per cent of the passenger car traffic, amounting to approximately 80,300 bus-miles per day, or 29,-310,000 during 1925.⁵

The large-capacity busses are generally found on the routes which carry comparatively large numbers of busses, except where heavy grades make the operation of the larger vehicles difficult. On the limited mileage of State highways which carries a considerable number of large-capacity busses this traffic must be considered in highway planning. The small passenger bus is similar to the passenger car and requires no special consideration, but the large bus traveling at high speed may, when present in large numbers, necessitate a high-type surface of greater width than would be required by other traffic on the route.

HIGHWAY UTILIZATION

URING 1925 traffic of passenger cars and trucks on the 84,884 miles of rural highways in Ohio was approximately 3,746,360,000 vehicle-miles. The distribution of traffic varies greatly on the several highway systems, on sections of each system, and in the several traffic areas of the State. The three classes into which the rural highways of the State are divided are, State highways, of which there are 11,000 miles, county highways, which total 22,991 miles, and township highways, of which there are 50,893 miles. The distribution of vehicle-mileage on each of these systems, or their traffic use, is shown in Table 13 and Figure 22.

The State highway system, 13.0 per cent of the rural highway mileage, carries 57.7 per cent of the traffic measured in vehicle-miles. Contrasted with this system is the township highway system with 59.9 per cent of the highway mileage and only 12.7 per cent of the vehicle-mileage.

The average daily density of traffic on the State system is 538 vehicles, on the county system 132, and on township roads only 26, as shown in Figure 23.

Each mile of road on the State system serves, on the average, more than four times as much traffic as each mile of the county system, and more than twenty times as much traffic as each mile of the township system. These facts furnish a reliable index of the relative importance of the three systems, and indicate the importance of allotting to the State highway system funds sufficient for its improvement in order to accommodate the large proportion of the total traffic which it serves.

Table 13-Motor Vehicle Utilization of Ohio Rural Highways and Highway Mileage by Systems1

Highway system	Mileage	Per cent of total mileage	Daily vehicle- miles	Annual vehicle- miles	Per cent of total vehicle-miles	Average daily traffic density
State highways	11,000	13.0	5,919,000	2,160,435,000	57.7	538
County highways	22,991	27.1	3,038,000	1,108,870,000	29.6	132
Township highways	50,893	59.9	1,307,000	477,055,000	12.7	26
Total	84,884	100.0	10,264,000	3,746,360,000	100.0	121

¹ Motor vehicles refers to passenger cars and trucks only, excluding motor busses.

⁶ Busses licensed by the Ohio Public Utilities Commission for intercity operation during 1925 operated approximately 36,640,000 bus-miles during the year, a considerable portion of which was on city and village streets.

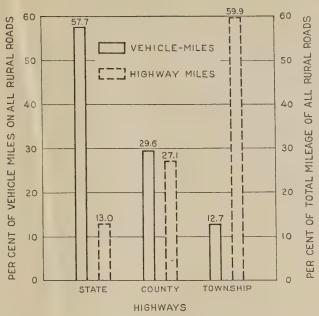


Fig. 22—Comparison of Traffic on the State, County, and Township Highway Systems, and the Proportionate Mileage of the Three Systems

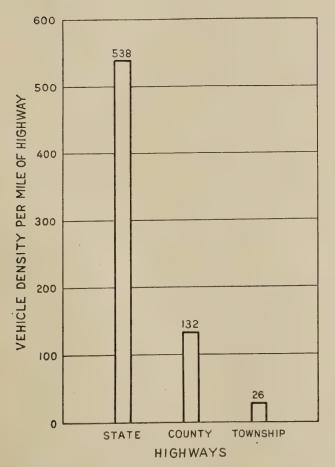


Fig. 23—Average Daily Density of Traffic on State, County, and Township Highways

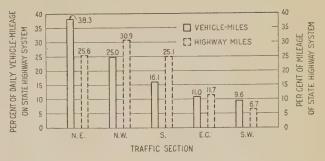


Fig. 24—Percentages of Total State Highway Mileage and Total Vehicle-mileage on the State System in the Several Traffic Sections of the State

The distribution of highway mileage and vehicle-mileage by highway systems in each of the five sections of the State is shown in Table 14. The same table also shows the percentage of the total daily vehicle-mileage and the average daily density of traffic in each section, and this information for the State highway system only is also presented graphically in Figures 24 and 25. As shown by these data, there is a marked variation in the traffic in different parts of the State and as between the three highway systems.

The State highways in the northeastern section of the State, comprising 25.6 per cent of the State highway mileage, carry 38.3 per cent of the total traffic on the State highway system. In the southwestern section there is 6.7 per cent of the State highway mileage which carries 9.6 per cent of total traffic on the system. In contrast with these areas is the southern section, with 25.1 per cent of

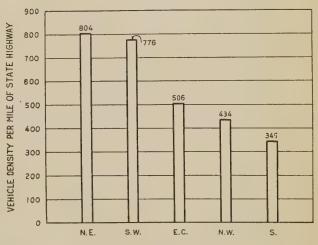


Fig. 25—Average Traffic Density on State Highways in the Five Traffic Sections

the State highway mileage and only 16.1 per cent of the total traffic on the system. Variations in traffic on the county and township system in the five regions are almost equally pronounced. These variations indicate the relatively greater need for highway improvements, particularly of surfaces adequate to carry the large volume of traffic upon the State highways in the areas of heavy traffic.

Traffic on the State highway system also varies greatly on the different routes, ranging from more

than 5,500 vehicles per day on the heaviest route observed to less than 50 vehicles per day. The daily use of selected sections of the State highway system is shown in Table 15 and Figure 26.

The Federal-aid system, slightly more than half the State system, carries 70.6 per cent of the daily traffic; main market roads, approximately one-third the mileage, carry over half the traffic; and the principal routes, 8.8 per cent of the mileage, carry over one-fourth of the traffic.

Table 14—Motor Vehicle Utilization and Mileage of Ohio Rural Highways in the Five Traffic Sections

Highway systems and sections of State ¹	Mileage of highways	Per cent of highway mileage	Daily vehicle-miles	Per cent of daily vehiclemiles	Average daily density of traffic
State Highways:					
Northeastern	2.821	25.6	2,268,000	38.3	804
Southwestern	736	6.7	571,000	9.6	776
East-central.	1,285	11.7	650,000	11.0	506
Northwestern	3,402	30.9	1,478,000	25.0	434
Southern	2,756	25.1	952,000	16.1	345
	2,700	20.1		10.1	
Total	11,000	100.0	5,919,000	100.0	538
County Highways:					
Northeastern	5,916	25.7	1,128,000	37.1	191
Southwestern	1,788	. 7.8	353,000	11.6	197
East-central	2.654	11.6	319,000	10.5	120
Northwestern	7,547	32.8	814,000	26.8	108
Southern	5,086	22.1	424,000	14.0	83
Total	22,991	100.0	3,038,000	100.0	132
Township Highways:					
Northeastern	10,625	20.9	428,000	32.8	40
Southwestern	2,579	5.1	102,000	7.8	. 39
East-central	7,372	14.5	184,000	14.1	25
Northwestern	14,889	29.2	326,000	24.9	22
Southern	15,428	30.3	267,000	20.4	17
Total	50,893.	100.0	1,307,000	100.0	26
All Highways:					
Northeastern	19,362	`22.8	3,824,000	37.3	197
Southwestern	5,103	6.0	1,026,000	10.0	201
East-central	11,311	13.3	1,153,000	. 11.2	102
Northwestern	25,838	30.5	2,618,000	25.5	101
Southern	23,270	27.4	1,643,000	. 16.0	71
State Total	84,884	100.0	10, 264, 000	100.0	121

¹ For the description of these sections of the State see Figure 10.

These divisions of the State highway system indicate clearly the variation in traffic on this system. The Federal-aid system includes the majority of the important traffic routes as well as a considerable number of routes of minor traffic importance. With few exceptions it includes all U. S. highways and main market roads as well as the roads designated as principal routes in Table 15.

The routes comprising the U. S. highways 6 include the major part of the principal through routes in Ohio. In several cases, however, they follow routes which are more direct but which, because of lack of improvement, do not carry a large volume of traffic. There are also a considerable number of heavy traffic routes near the larger cities which are not included in the U. S. highways.

The main market road system includes the most important routes in the various sections of the State. It includes, however, a number of routes in the sparsely populated sections which do not compare in traffic importance with several routes in the more densely populated sections of the State that are not included in the main market system.

The principal routes represent a selection of

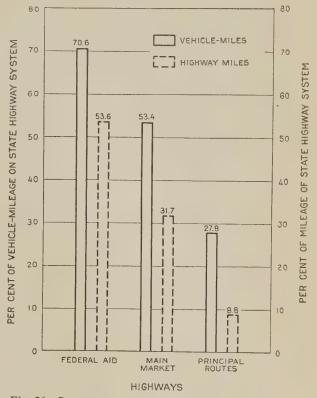


Fig. 26—Percentages of the Total Vehicle-mileage on the Inter-county System Carried by the Federal-aid, and Main Market Highways and by the Principal Routes of the State; and the Mileage of the Several Classes of Highways

highways, or sections of routes carrying the heaviest traffic. These routes, comprising 8.8 per cent of the State highway system, carry 27.8 per cent of the total traffic on the system. Their

Table 15-Average Daily Traffic on Selected Sections of the State Highway System

Sections of system	Highway mileage	Per cent of State highway system	Per cent of total rural highway system	Average daily vehicle- miles		Per cent of daily vehicle- miles on all rural highways	Average daily density of traffic
Federal-aid system ¹ U. S. highways Main market roads Selected principal routes State highway system	5,899	53.6	6.9	4,177,000	70.6	40.7	708
	1,878	17.1	2.2	1,848,000	31.2	18.0	984
	3,486	31.7	4.1	3,158,000	53.4	30.8	906
	970	8.8	1.1	1,645,000	27.8	16.0	1,696
	11,000	100.0	13.0	5,919,000	100.0	57.7	538

¹ With few exceptions the Federal-aid system includes all U. S. highways and main market highways as well as the roads designated as principal routes.

⁶ U. S. system of highways adopted for uniform marking by the American Association of State Highway Officials.



A grim warning of danger. The crosses mark the site of six accidents

average daily traffic is approximately four times as great as the traffic on the balance of the State system.

The distribution of passenger car and motor truck traffic on the different highway systems is shown in Table 16.

Motor truck traffic on the township system, and to a lesser degree on the county system, is almost exclusively made up of small-capacity trucks, while on the State system it includes a larger proportion of medium and large-capacity trucks.

There is also considerable variation in the relative number of passenger cars and trucks on different routes of the State highway system. Motor trucks vary from less than 6 per cent to more than 20 per cent of total number of vehicles. The extremes of the range are found on routes of minor traffic importance; on nearly all the important traffic routes the percentage falls between 7 and II. Passenger cars are found to be relatively more important on the principal through routes, and the greatest proportion of trucks is found on important routes which are not a part of these through routes in the industrial areas.

Table 16-Motor Truck and Passenger Car Utilization of Ohio Rural Highways by Systems

System	Daily truck-miles	Per cent of total truck- miles	Daily passenger- car-miles	Per cent of total passenger-car-miles	Ratio of truck- miles to total vehicle-miles
State highways County highways		54.1 31.8	5,354,000 2,706,000	58.1	9.5
Township highways		14.1	1,160,000	12.6	11.2
Total	1,044,000	100.0	9,220,000	100.0	10.2

COMPOSITION OF HIGHWAY TRAFFIC

Passenger Cars

VERAGE daily passenger car traffic on the State highway system is approximately 5,354,000 passenger-car-miles. The distribution of this mileage as between cars registered in Ohio and other States (foreign), touring and non-touring trips, business and non-business usage, and city and farm ownership, is shown in Table 17.

The distribution for the entire State highway system as shown in this table varies greatly on

large at all points along the route. The highest proportion of foreign traffic was found on the National Pike (Route U. S. 40), on which 23.6 per cent of the passenger car traffic was of foreign registration. Other important routes on which foreign traffic is very large were the Chicago-Buffalo Highway (including parts of U. S. 20 and State Routes 102 and 2), 22.4 per cent; the Dixie Highway (including parts of U. S. 25 and State Routes 73 and 4), 15.2 per



A typical roadside market

different routes and also at different seasons of the year and on different days of the week.

Passenger car traffic by cars of foreign registration is greatest on routes near the State boundaries and on the principal through interstate routes. Near the State boundaries foreign traffic approximates 50 per cent of the total, the exact proportion varying with the location of the principal trading center of the area. On the principal interstate routes foreign traffic is

cent; the Ohio River Route (including parts of U. S. 52 and State Route 7), 12.0 per cent; and the Lincoln-Harding Highway (Route U. S. 30), 11.3 per cent.

Important through routes which have their principal termini within the State have a smaller proportion of foreign traffic. On the Scioto Trail (including parts of U. S. 23 and State Route 4) 9.6 per cent of the total passenger car traffic is of foreign registration; on the Three

Table 17—Composition of Passenger Car Traffic on the State Highway System

		_			
Type of traffic	Daily passenger- car-miles	Per cent of daily passenger-car- miles			
State of registration: Ohio	4,808,000 546,000	89.8 10.2			
Foreign Type of trip: Touring Non-touring	209,000 5,145,000	3.9 96.1			
Type of usage: Business Non-business	2,966,000 2,388,000	55.4 44.6			
Situs of ownership: City Farm	4,690,000 664,000	87.6 12.4			
All types	5,354,000	100.0			

"C" Highway (State Route 3) the percentage is 7.6; and on the Cleveland-Marietta Road (including parts of U. S. 21 and State Route 8) it is 4.9 per cent. On other routes except near the State boundaries foreign traffic is of minor importance.

Touring traffic, defined as trips of more than one day's duration taken primarily for purposes of recreation, is also limited largely to the important through routes. On the National Pike 15.7 per cent of the total traffic is made up of touring trips; and on the Chicago-Buffalo Highway the corresponding percentage is 11.9. On other important through routes touring trips form from 4.5 to 6.1 per cent of total passenger car use; and on the remaining highways touring traffic is of little importance.

More than half of all passenger car traffic is made up of cars used for business purposes. Business traffic is of greatest importance near the larger centers of population and on routes connecting industrial cities, and of less importance on those sections of the important through routes which are a considerable distance from the larger cities.

That the passenger car traffic on the State highway system is also predominantly a traffic of city-owned cars is shown by Figure 27. Farmowned cars are responsible for only 12.4 per cent

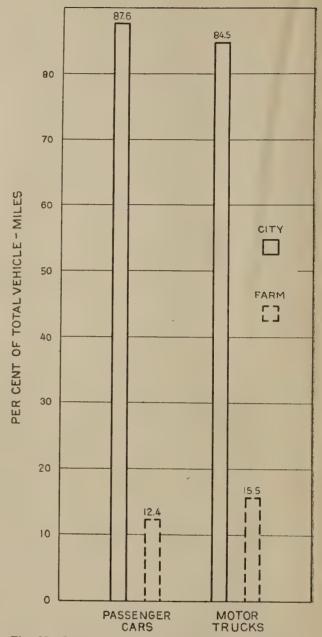


Fig. 27—Comparison of City and Farm Passenger Car and Motor Truck Traffic on State Highways

of total passenger car use of these highways, and their movement is primarily of local range. The number of farm-owned cars using each route is more uniform than the total traffic on the route, although the volume of farm traffic varies with the agricultural development of the area. On the heavy traffic routes, those having passenger car traffic in excess of 1,500 vehicles per day, farm-owned traffic forms 7.9 per cent or the total; on routes carrying less than 500 vehicles

per day the farm-owned vehicles constitute 26.8 per cent of the total.

The composition of passenger car traffic shown in Table 17 is based upon a year period. There is, however, a large seasonal variation in the composition of this traffic. Non-business and touring traffic are predominantly summer movements. Foreign traffic, except the local movement near State boundaries, is also primarily a summer movement. Business traffic shows less seasonal variation than non-business, and farm-owned traffic varies less than the traffic of city-owned cars.

Business traffic is quite uniform on all week days, but on Sundays the traffic is almost exclusively non-business. Foreign and touring traffic remain quite uniform in volume throughout the week. Farm traffic in most areas is considerably higher on Saturdays than on other days of the week.

There is also a marked variation in the average mileage per trip and in the average number of passengers per car for different types of passenger car traffic. These variations are shown in Table 18.

Average total trip-mileage represents the mile-

Table 18—Average Mileage per Trip and Average Number of Passengers per Car for Various Types of Passenger Car Traffic¹

	Avera	ge mileage per trip	Average number of passengers per car	
Type of traffic	Total	On Ohio highways		
State of registration:				
Ohio	38	31	2.2	
Foreign	340	134	2.7	
Type of trip:	0.10	101	2. 8	
Touring	667	220	3.1	
Non-touring	44	34	2.2	
Type of usage:				
Business	37	29	1.8	
Non-business	146	70	3.1	
Situs of ownership:				
City	88	51	2.3	
Farm	12	10	2.1	

¹ The averages shown in this table are based on 208,000 samples obtained from all parts of the State.

age of the car from origin to destination, and average trip-mileage on Ohio highways represents the length of the trip in Ohio, including mileage traveled on city streets as well as on rural highways. Averages in each case are arithmetic means and are, therefore, influenced by the relatively small number of exceptionally long trips. Non-touring trips, which comprise 96.1 per cent of the total use, average 44 miles per trip. Farm traffic is characterized by predominantly short trips, and the average business trip is also short as compared with non-business usage.

The average car used for business purposes carries less than two passengers as compared with more than three for touring and non-business traffic.

The effect upon average mileage of a relatively small number of long distance trips is indicated in Table 19, in which the distribution of traffic by length of trip is shown.

Table 19—Distribution of Passenger Car Traffic by Length of Trip

Length of trip	Proportion of passenger car traffic
Miles	Per cent
0- 9	27.9
10- 19	22.8
20- 29	9.7
30- 39	5.7
40- 49	
50- 59	2.9
60- 69	3.1
70- 79	1.7
80- 89	1.3
90- 99	1.1
100-149	5.1
150–199	3.2
200–299	3.5
300 and over	8.4

The trip-mileage of 50.7 per cent of the traffic is less than 20 miles, of 66.1 per cent less than 40 miles, and of 72.6 per cent less than 60 miles as shown in Figure 28. Approximately one-fifth of the passenger-car traffic is made up of cars traveling 100 or more miles. Long distance traffic is largely limited to the principal through routes, and to routes leading to areas which attract tourist traffic, such as recreational resorts and places of historic interest.

Motor Trucks

AVERAGE daily motor-truck traffic on the State highway system is approximately 565,000 truck-miles. The distribution of this mileage as between trucks registered in Ohio and other States (foreign), between trucks for hire and privately operated trucks, and between city and farm ownership, is shown in Table 20.

Table 20—Composition of Motor Truck Traffic on the State Highway System

Type of traffic	Average daily truck-miles	Per cent of total daily truck-miles			
State of registration:					
Ohio	538,000	95.3			
Foreign	27,000	4.7			
Type of trucking:					
For hire1	119,000	21.1			
Privately-operated	446,000	78.9			
Situs of ownership:					
City	477,000	84.5			
Farm	88,000	15.5			
All types	565,000	100.0			

¹ Trucks for hire include those engaged in both contract and tariff haulage.

Trucks of foreign registration form an important part of the truck traffic only near State boundaries. On the important traffic routes foreign trucks are found in greater numbers at some distance from the State boundaries, but on

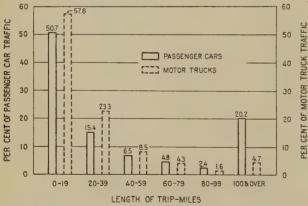


Fig. 28—Distribution of Passenger Car and Motor Truck
Traffic by Length of Trip

no route is foreign truck traffic important in the central part of the State. The Chicago-Buffalo Highway carries more through truck traffic of foreign registration than any other route in the State, and the section of this route from Norwalk through Cleveland to Ashtabula carries a daily average of only nine loaded foreign trucks. The National Pike and Dixie Highway, which carry a considerable volume of foreign passenger car traffic throughout their entire length, carry a daily average of only one to three loaded foreign trucks in the central part of the State.

The average cargo of foreign trucks is 2,900 pounds as compared with an average of 2,580 pounds for Ohio trucks. This variation is due principally to the smaller proportion of small-capacity trucks among those of foreign registration. The average trip-mileage of foreign-truck traffic is 153 miles as compared with an average of 26 miles for Ohio trucks. The principal commodities transported by foreign trucks are household goods, automobile bodies and parts, and general express. These commodities form over 40 per cent of all tonnage transported in trucks of foreign registration.

Table 21—Principal Commodities Hauled by Hired Trucks

Commodity	Percentage of total number of hired trucks	Average cargo	Average trip- mileage		
		Pounds	Miles		
Household goods	11.0	3,690	127		
Cans, empty milk	10.5	1,790	25		
Milk	10.2	5,060	27		
General freight	8.2	5,010	39		
Clay, gravel, sand and					
`stone	8.0	7,180	9		
Coa1	7.8	4,440	6		
General express	5.0	7,900	67		
Groceries	4.7	5,930	45		
Miscellaneous	34.6	.5,410	49		
Total and average	100.0	4,370	45		

Trucks operated for hire on a contract or tariff basis produce 21.1 per cent of the truck-mileage on the State highway system. These hired trucks are found on the entire State system, but are most numerous in the industrial regions, where total truck traffic is also greatest.

Trucks operated for hire carry mainly a few special commodities, approximately two-thirds of the number being engaged in the transportation of the eight commodities listed in Table 21.

Milk haulage, including the transportation of milk and empty milk cans, makes up 14.5 per cent of the tonnage moved on hired trucks, and 20.7 per cent of these trucks are engaged in this one The average trip-mileage for traffic of hired trucks is 45 miles as compared with 29 miles for privately-operated trucks. In Table 23 is shown the distribution of for-hire and privately-operated trucks according to length of trip.

Traffic of farm-owned trucks which produces 15.5 per cent of truck-mileage on the State system, as shown in Figure 27, is distributed over the entire State system. It is primarily a local farm-to-market movement and is more uniformly distributed than the traffic of trucks owned in cities. The volume of traffic by farm-owned trucks varies with the agricultural development of the area. The greatest numbers of farm trucks are found



Milk and other dairy products are among the principal commodities hauled by trucks

business. The greater part of the movement of milk by truck in Ohio, 73.6 per cent of the total, is on trucks of this class, their average cargo being 5,060 pounds and average length of haul 27 miles.

Household goods are transported by II.0 per cent of the trucks operating for hire and the average length of haul of such goods is 127 miles. Approximately four-fifths of the total motor truck tonnage of household goods is carried by hired trucks.

Large-capacity trucks make up a larger proportion of the total number in the case of trucks operated for hire than in the case of privately-operated trucks, and the former are commonly loaded more nearly to full capacity. These facts are brought out by Table 22.

near the larger cities on the routes which bring into the cities the largest volume of farm products. The smallest numbers are found in the lesser agricultural areas, but in the greater part of the State this traffic is quite uniform. The average trip-mileage of farm-owned trucks is 20 miles as compared with 34 miles for trucks owned in cities, and the average net load per truck is 1,830 pounds as compared with 2,720 pounds for trucks owned in cities.

The average trip-mileage of all truck traffic operating on the State highway system is 32 miles and the average on Ohio highways, including city streets, is 27 miles. The distribution of all truck traffic according to length of trip is shown in Table 24 and Figure 28.

Table 22-Classification of Hired and Privately-operated Trucks According to Capacity

	Trucks opera	ated for hire	Privately-operated trucks			
Capacity of truck	Per cent of total number	Average cargo	Per cent of total number	Average cargo		
Tons		Pounds		Pounds		
½—1½	47.4	2,610	78.5	1,370		
$-2\frac{1}{2}$	28.8	5,170	14.5	3,750		
-4	19.1	6,530	5.5	6,090		
$-7\frac{1}{2}$	4.7	8,490	1.5	7,490		
Total	100.0	4,370	100.0	2,070		

Table 23—Distribution of For Hire and Privately-operated Trucks According to Length of Trip

Length of trip	Trucks operated for hire	Privately operated trucks			
Miles	Per cent	Per cent			
0-19	42.5	61.9			
20-39	27.8	22.8			
40-99	19.8	11.8			
100 & over	9.9	3.5			
Total	100.0	100.0			

Of all trucks observed 57.6 per cent travel less than 20 miles per trip and 80.9 per cent less than 40 miles per trip. Only 4.7 per cent travel 100 miles or more per trip and only 6.3 per cent 80 miles or more.

Trucks of small capacity predominate in motor truck traffic, and the net load of cargo is correspondingly small as shown in Table 25.7

The State highway system carries a daily average of approximately 440,000 net ton-miles of commodities. The corresponding gross ton-mileage, including weight of truck and load, is 1,749,000 ton-miles. During the year period these highways carried approximately 160,000,000 ton-miles of commodities and 638,000,000 gross ton-miles of truck traffic including weight of truck and load.

Table 24—Distribution of Motor Truck Traffic by Length of Trip

Trip-mileage	Per cent of total motor truck traffic
0-9	29.0
10–19	28.6
20–29	14.0
30-39	9.3
40-49	5.1
50-59	3.4
60-69	2.9
70–79	1.4
80–89	1.0
90–99	0.6
100 & over	4.7
Total	100.0

Table 25—Distribution of Loaded Trucks and Average Net Load of Cargo by Capacity Groups

Capacity group	Per cent of total loaded trucks	Average net load of cargo per truck			
Tons		Pounds			
1/2-11/2	73.4	1.540			
$2-2\frac{1}{2}$	16.6	4,260			
3-4	7.9	6,310			
5-5½	2.0	7,970			
6-7½	0.1	6,930			
Total	100.0	2,570			

⁷ The maximum gross load limitation of 20,000 pounds on Ohio State highways influences the size and net and gross loads of motor trucks using Ohio highways.

HIGHWAY TRAFFIC AND POPULATION

HE volume of highway traffic in an area is largely a product of the population of the area, since population reflects motor-vehicle registration and use.

Analysis of the trip-mileage of motor vehicles in Ohio shows that 60.4 per cent of the cars observed travel less than 30 miles per trip and approximately 70.0 per cent less than 50 miles; also that 71.6 per cent of the trucks travel less than 30 miles and only 14.0 per cent more than 50 miles per trip. Highway traffic is, therefore, primarily a method of local transportation.

daily traffic on the State highway system, population of urban areas, and township population and trends per square mile. The greatest density of traffic and population per route, as well as the larger number of important traffic routes, are found in the areas tributary to the large centers of population.

The concentration of traffic on the highways of the Cleveland, Cincinnati, Toledo, Columbus, Akron, Dayton, Youngstown, and Canton areas is clearly evident. These eight cities included in 1920, 39.2 per cent of the total population of the



Steel works at Youngstown, Ohio

As indicated by the above percentages, the volume of traffic in an area is principally produced by the population residing within a radius of 30 miles, less than 30 per cent of the truck traffic and less than 40 per cent of the passenger-car traffic being produced outside of a 30-mile zone. In areas which attract large numbers of tourists, such as parks and recreational resorts, and in areas of relatively low population density which are traversed by routes connecting important centers of population, the zone of influence is somewhat larger and the relative importance of local traffic correspondingly smaller.

The relationship between traffic and population is presented in Figure 8 which shows the average

State, and the traffic from them is the principal part of the total traffic on the highways of their tributary areas.

Since statistical data in Ohio are compiled on a county basis, it has been necessary to group the traffic and population divisions of the State on the same basis, although the natural traffic divisions of the State do not correspond exactly with county boundaries.

The various parts of the State show distinctive characteristics as to traffic, population, topography, and industrial development, but the limits of these sections are not exact.

The State has been divided into five traffic sections, based principally on variations in traffic, and

the counties in each of the five main areas are again classified as primary or secondary traffic and population areas within each section, as shown in Figure 10 and Tables 26 and 27 and discussed on pages 32 to 35 inclusive.

The northeastern section, including 23.6 per cent of the area of the State, is clearly predomi-

nant in those factors which are primarily responsible for a large volume of traffic on rural highways. Population ranges from 2,037.8 per square mile in Cuyahoga County to 36.1 in Geauga County, an average of 264 per square mile. This section shows a 43.6 per cent increase in population between 1910 and 1920, ranging

Table 26—Area, State Highway Mileage, Motor Vehicle Registration, Vehicle-mileage on the State Highway System, and Population

Section	Area		State highway mileage		Motor vehicle registration 1925 ¹		Daily vehicle- miles on State highway system		Population 1920		Increase inpopulation1910-
	Square miles	Per cent	Miles	Per cent	Number	Per	Vehicle- miles	Per	Persons	. Per cent	Per cent
I. Northeastern: A	4,313 3,716 1,574 9,603	10.6 9.1 3.9	1,261 1,109 451 2,821	11.4 10.1 4.1	439,114 142,483 28,512 610,109	10.7	1,261,000 759,000 248,000 2,268,000	12.8	1,873,902 555,378 106,648 2,535,928	32.5 9.6 1.9	55.5 19.8 9.0
Total II. Southwestern: A B	1,314	3.2 3.0	376 360 736	$\frac{3.4}{3.3}$	166,196 37,773	12.5 2.9 15.4	355,000 216,000 571,000	6.0 3.6	790,235 160,377 950,612	13.7 2.8 16.5	13.7 13.6 13.7
Total III. East-central: A B	3,208	7.9	866 419	7.9 3.8	85,019 18,360 103,379	6.4	532,000 118,000 650,000	9.0 2.0	420,814 82,127 502,941	7.3 1.4 8.7	11.9 -0.9
Total IV. Northwestern: A B C		1.3 3.7 25.3	1,285 117 419 2,866	1.1 3.8 26.0	75,131 37,337 157,468	5.7 2.8 11.9	134,000 303,000 1,041,000	2.3 5.1 17.6	283,951 150,662 644,887	5.0 2.6 11.2	28.2 8.1 —1.0
TotalV. Southern:	12,343	30.3	3,402	30.9	269,936	20.4	1,478,000	25.0	1,079,500	18.8	6.6
A	2,551	1.5 6.3 19.9	122 571 2,063	1.1 5.2 18.8	15,217 38,864 84,579	1.1 2.9 6.4	98,000 255,000 599,000	1.7 4.3 10.1	62,850 181,549 446,014	1.1 3.2 7.7	, 29.7 2.6 -4.7
Total State total	<u> </u>	27.7	2,756	25.1	138,660	10.4	952,000	16:1	690,413	12.0	

¹ Based on county registration totals; varies from State total because of exclusion of State cars, etc.

² Minus sign indicates decrease in population.



The ore docks at Cleveland



A motor vehicle factory



The brick industry



A typical limestone quarry

Some of the industries of Ohio

from an increase of 164 per cent in Summit County to a small decrease in Fulton, Huron, Ottawa, and Wood Counties. There are 22 of the 50 cities with a population over 10,000 and 10 of the 21 cities over 25,000 in this section. Of the total population, 78.3 per cent is urban, living in incorporated cities or villages of over

2,500 persons. Daily traffic on the State highway system averages 804 vehicle-miles per mile.

The principal industrial area of Ohio is located in this northeastern region surrounding the cities of Cleveland, Akron, Youngstown, and Canton, and therefore Lorain, Cuyahoga, Lake, Summit, Stark, Wayne, Mahoning, Portage, and Trumbull Counties are grouped as division A. Traffic on the State highways averages 1,000 vehicles per day in this division.

Division A includes 17 of the 22 cities in the northeastern section having a population over 10,000 and 8 of the 10 cities having a population of over 25,000. All counties in this division, with the exception of Wayne, showed a population increase between 1910 and 1920 of approximately 20 per cent or more. In Wayne County population increased 8.6 per cent. The population of the entire division increased 55.5 per cent during the same period.

In division B are grouped counties which form a secondary industrial and agricultural region of considerable importance. Lucas County, including the city of Toledo, with a population density of 806.2 persons per square mile, is the most important source of traffic in this area. Population density in other counties ranges from 155.4 in Erie County to 57.9 in Fulton County. Population dincreased 43.1 per cent between 1910 and 1920 in Lucas County, 15.8 per cent in Richland County, while Ashland, Sandusky, and Erie Counties increased less than 10 per cent. Population in Fulton, Huron, Ottawa, and Wood Counties decreased from 0.7 to 5.2 per cent.

The remaining counties in the northeastern section, Ashtabula, Medina, and Geauga, although not contiguous are grouped as division C. These counties are relatively sparse in population, and are partially surrounded by more densely populated areas. Motor vehicle traffic is considerably lighter than in the other divisions of the northeastern section, but is of greater importance than that of areas of similar population in other parts of the State, a condition which is largely due to traffic originating in adjacent counties but using the highways of these three counties.

The southwestern section, 6.2 per cent of the area of Ohio, forms an important industrial area second in importance to the northeastern section, and includes the cities of Cincinnati and Dayton as well as a number of smaller industrial cities.

Division A of this section has a population density ranging from 1,213.0 per square mile for Hamilton County to 192.5 for Butler County. Highway utilization is correspondingly large,

averaging 944 vehicle-miles per mile of State highway—a figure which would be considerably higher were it not for the large mileage of important routes lying within the corporate limits of Cincinnati and adjacent cities. This division includes 3 cities of over 25,000 population each, and shows a rapid increase in population between 1910 and 1920.

Division B is secondary in importance to and tributary to division A. It has an average population density of 130.4 per square mile and a traffic of 601 vehicle-miles per mile—both well above that of the neighboring counties in the adjoining sections.

The east-central section, 12.2 per cent of the area of the State, is located between the intensely industrial northeastern section and the agricultural and mining area to the south. It has an average population per square mile of 101.2, and an average daily traffic of 506 vehicle-miles per mile of State highway. The more densely populated of these counties are grouped as division A, in which population ranges from 87.3 to 190.6 persons per square mile and the rate of population increase from less than one per cent in Muskingum County to 21.3 per cent in Belmont. Approximately one-half of the population is urban.

The remaining counties of the east-central section are grouped as division B. Population ranges from 40.6 to 53.0 persons per square mile; two of the counties increasing and two decreasing in population. Three of the four counties in this division have no cities or villages with a population of over 2,500 persons.

The northwestern section, including 27 counties, and 30.3 per cent of the area of the State, is primarily an agricultural region, but includes several important industrial areas. Population averages 87.5 persons per square mile and increased 6.6 per cent between 1910 and 1920.

Franklin County, including Columbus, the fourth largest city and the capital of Ohio, greatly exceeds the other counties in traffic and population and is therefore classed as division A.

Allen, Delaware, and Licking Counties, similar in traffic density, but quite different in population, are grouped as division B. Allen County, including the city of Lima, has a population of 168.0 persons per square mile and a traffic density of 724 vehicle-miles per mile of State highway. The traffic on the highways of Delaware and Licking Counties is considerably increased by traffic from Franklin County.

The remaining 23 counties are grouped as division C. Population density ranges from 38.6 in Morrow County to 102.7 in Marion County. Eighteen of the 23 counties range between 45 and 75 persons per square mile. Marion County alone shows a large population increase. Six counties show small increases and 16 counties are decreasing in population. Traffic is quite uniform within this division, being highest in Marion County, which also has the highest population density, and second in Hancock County, through which passes the important route connecting Toledo with Lima, Dayton, and Cincinnati.

The southern section, including 24 counties and 27.7 per cent of the area of the State, located south of the east-central section and east of Hamilton and Butler Counties, is primarily an agricultural area. Mining is important in some of the eastern counties and manufacturing in the vicinity of Portsmouth. Because of the irregular topography and soil conditions, the area does not equal in productivity the fertile glaciated section in the western part of the State. Population density ranges from 103.6 per square mile in Athens County to 29.3 in Vinton. Seventy-two per cent of the population is rural, and the section as a whole shows a very small decrease in population between 1910 and 1920. County, due largely to the city of Portsmouth, is distinct from the other counties in this section. Traffic density per mile is greater than in the surrounding counties, and it is the only county in which population is rapidly increasing. Population density is 100.9 persons per square mile, but more than three-fourths of the total population is in the city of Portsmouth. Because of the marked differences between Scioto County and the surrounding area it is classed as division A.

In division B are grouped Athens, Fairfield, Hocking, Pickaway, and Ross Counties. These counties have quite uniform traffic density, exceeding that of the remaining counties. Population per square mile is also slightly higher.

The remaining counties of the southern section are grouped as division C. These counties are uniformly low in traffic density and population. In 14 of the 18 counties population decreased between 1910 and 1920, and the largest increase was in Warren County, which increased 5.0 per cent.

Comparison of the area of the five sections and their highway mileage (Table 26) indicates that the distribution of State highway mileage is quite uniform throughout the State. The more densely populated areas (the northeastern and southwestern sections) have a slightly higher ratio of State highway mileage than of area and the reverse is true in the southern section and division B of the east-central section. In limited areas, a considerable part of which is urban in character, the proportion of highway mileage to area is also small. This is largely explainable by the fact that the State highway system includes only rural highways and in divisions such as southern A (Scioto County) and northwestern A (Franklin County) a considerable portion of the mileage which normally would be included in the State highway system is made up of city streets.

Differences in the distribution of population and motor vehicle registration reflect the variations in car ownership in various areas. Car ownership in proportion to population is lowest in the poorer rural areas and in the large industrial cities.

The distribution of vehicle utilization on State highways does not agree closely with either area, highway mileage, motor vehicle registration or population. The percentage of total vehicle-mileage on State highways in each section, however, is approximately at the midpoint between the percentages of each of the other factors and is undoubtedly the product of these factors, but the relative importance of each factor is probably not equal and may also vary in different parts of the State.

Further comparisons of the factors producing traffic are shown in Table 27, which shows for each section and division the daily vehicle-miles on the State highway system per unit of area, population, motor vehicle and highway; as well as population and registration per unit of area, and population per motor vehicle.

Comparison of population, motor vehicles and vehicle-mileage on State highways per square mile of area indicates several very marked variations. In Figure 29 the data are plotted about the State average in each case as a base. The bars representing population and motor vehicle registration are quite similar, the largest variation

being in northwestern A (Franklin County). This variation is partly explained by the large number of State-owned cars included in Franklin County registrations.

The three divisions having the greatest density of population also have the greatest volume of traffic per square mile but the traffic is not in the

Table 27—Daily Vehicle-miles on State Highways per Unit of Area, Population, Motor Vehicle and Highway; Population and Motor Vehicles per Unit of Area; and Population per Motor Vehicle

		Motor	Daily vel	nicle-miles on	State highwa	ny system	Persons ¹	
Section per squa	Persons per square mile, 1920	vehicles per square mile, 1925	Per square mile	Per person, 1920	Per motor vehicle, 1925	Per mile of State highway	per imotor vehicle	
Northeastern:								
A	434.5	101.8	292.4	0.67	2.87	1,000	5.13	
В	149:5	38.3	204.3	1.37	5.33	684	4.28	
C	67.8	18.1	157.6	2.32	8.70	549	3.92	
Total	264.1	63.5	236.5	0.89	3.72	804	4.87	
I. Southwestern:							E 00	
A	601.4	126.5	270.2	0.45	2.14	944	5.08	
B	130.4	30.7	175.6	1.35	5.72	601	4.53	
Total	373.7	80.2	224.4	0.60	2.80	. 776	4.98	
II. East-central:							FOF	
A	131.2	26.5	165.8	1.26	6.26	614	5.25	
В	46.6	10.4	66.9	1:43	6.34	281	4.50	
Total	101.2	20.8	130.7	1.29	6.29	506	5.11	
V. Northwestern:				0.45	4 70	1 144	4.25	
A	549.2	145.3	259.2	0.47	1.78	1,144	4.23	
B	99.1	24.6	199.3	2.01	8.12	723	4.22	
C	62.6	15.3	101.0	1.61	6.61	303	4.14	
Total	87.5	21.9	119.7	1.37	5.48	434	4.18	
7. Southern:							1 (7	
A	100.9	24.4	157.3	1.56	6.44	801	4.67	
B	71.2	15.2	100.0	1.40	6.56	446	4.75	
C	55.0	10.4	74.0	1.34	7.09	291	5.29	
Total	61.2	12.3	84.4	1.38	6.87	345	5.07	
State total	141.4	32.5	145.3	1.03	4.46	538	4.79	

¹ Based on estimated population 1925.

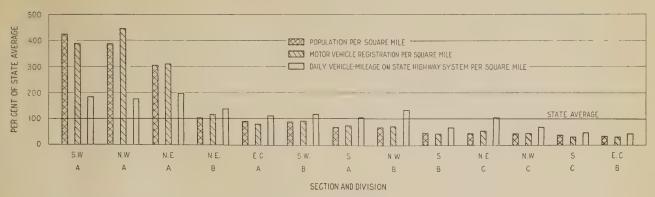


Fig. 29—Population, Motor Vehicle Registration, and Daily Vehicle-mileage on the State Highway System per Square Mile in the Several Traffic Sections and Divisions of the State

same ratio to population or motor vehicle registration as in other parts of the State. This variation is the effect of several causes, the most important of which are:

- I. These three divisions, southwestern A, northwestern A and northeastern A, include all of the larger cities of the State except Toledo. As a result a proportionately larger volume of the total traffic is upon city streets and a correspondingly smaller volume on State and other rural highways.
- 2. Traffic produced in these areas uses highways in other areas to a greater extent than traffic produced in other areas uses the highways of the three dense population areas. This is evident from the relatively large volume of traffic in northwestern B and northeastern C divisions, which are adjacent, respectively, to northwestern A and northeastern A.
- 3. In the dense population areas county and town roads are of greater relative importance than in the sparsely populated areas and therefore carry a larger proportion of the total rural traffic.

In Figure 30, vehicle-miles per mile of State highway and per registered vehicle are plotted about the State average in each case as a base. Divisions are arrayed in order of population density. Vehicle-miles per unit of area and per unit of highway mileage agree quite closely in all cases. Variations between these two factors indicate variations in the distribution of highway

mileage in proportion to area. Vehicle-miles per person and per motor vehicle also agree quite closely. Variations in these factors reflect variations in motor vehicle ownership in proportion to population. There is a marked variation between vehicle-miles per unit of area and highway mileage on the one hand and vehicle miles per motor vehicle and per person on the other hand. Use of State highways per vehicle and per person is relatively small in the densely populated areas as compared with the sparsely populated areas. These variations again reflect the greater relative use of city streets and county highways in the densely populated areas, and a lesser relative use of city streets and county highways in the sparsely populated areas.

The percentage of urban to total population (Table 28) in the three densely populated sections, northeastern A, southwestern A, and northwestern A, is very uniform, ranging between 83.5 and 84.7 per cent as compared with an average of 63.8 for the State. These three areas include 67.8 per cent of the total urban population of the State as compared with 21.8 per cent of the total rural population. These same areas include 6 of the 7 cities in the State having a population of over 100,000 persons.

Subject to the variations discussed above—variations in urban and rural population and resulting variations in the distribution of traffic between rural highways and city streets, variations in car ownership per person, variations in the relative proportion of total highway mileage which is included in the State highway system, and variations in the amount of foreign traffic (i.e.,

traffic originating outside the area) on the highways of the area—the population of an area is a reliable measure of total traffic on the State highway system within areas of considerable size.

In many of the counties of Ohio the traffic produced in adjacent counties, which include large centers of population, makes up a large part of the traffic using the highways in these areas of low population and motor vehicle registration. This is evident from a comparison of the daily vehicle-miles on State highways per registered vehicle for the State with the same ratio for individual counties. As shown in Table 27, the ratio for the entire State is 4.46. In the north-eastern and northwestern sections of the State there are 8 counties that show more than 10 vehicle-miles per day per vehicle on the State system, as shown in Table 29.

These counties are all adjacent to large centers of population and are traversed by important

Table 28—Distribution of Urban and Rural Population and of Cities and Villages of Over 10,000
Population by Sections of the State

	Per cent of	Per cent of	Per cent	Numbe	r of cities	of over	10,000 por	oulation
Section .	total urban population of State	total rural population of State	urban of total population of section	Total	10,000- 25,000	25,000- 50,000	50,000-	Over 100,000
I. Northeastern:								
A	43.1	13.8	84.6	17	9	4	1	3
В	9.7	9.5	64.3	4	2	1	0	1
C	1.2	3.1	40.0	1	1	0	0	0
Total	54.0	26.4	78.3	22 .	12	5	1	4
II. Southwestern:								2
A	18.2	5.8	84.7	5	2	1	0	$\frac{2}{0}$
В	2.5	3.3	57.5	2	11	0	1	
Total	20.7	9.1	80.1	7	3	1	1	2
III. East-central:								
A	5.7	10.1	50.1	8	6	2	0	0
В	0.3	3.4	13.2	1	1	0	0	0
Total	6.0	13.5	44.1	9	7	2	0	0
IV. Northwestern:								
A	6.5	2.2	83.5	1	0	0	0	1
В	2.2	3.4	53.1	2	0	2	0	0
C	5.5	21.2	31.5	4	3	1	0	0
Total	14.2	26.8	48.2	7	3	3	0	1
V. Southern:								
A	1.0	1.2	60.2	1	0	1	0	0
В	1.6	5.9	32.5	2	2	0	0	0
C	2.5	17.1	20.3	2.	2	0	0	0
Total	5.1	24.2	27.1	5	4	1	0	0
State total	100.0	100.0	63.8	50	29	12	2	7

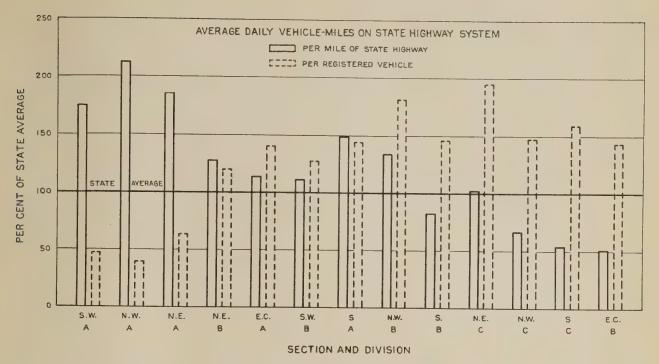


Fig. 30—The Average Daily Vehicle-mileage on the State Highway System per Mile of Highway and per Registered Vehicle

through routes. It is evident that in areas such as these, where the ratio of traffic to registered vehicles is from two to four times the State ratio, traffic from other areas forms an important part of the total traffic.

These variations in traffic are a valuable guide to highway finance. A county or area in which a

Table 29—Comparison of Population and Vehicle-miles per Registered Vehicle

Area	Population per square mile	Daily vehicle- miles on State highways per registered vehicle
State	141.4	4.46
County:		
Geauga	36.1	18.58
Ashland	58.5	14.11
Portage	69.6	13.84
Delaware	58.5	13.31
Madison	39.6	12.42
Fulton	57.9	11.56
Lake	119.0	11.10
Huron	65.6	10.43

large part of the traffic is from outside sources should not be expected to contribute a major portion of the cost of building and maintaining these main routes. The same condition is true for other areas in Ohio, and it again supports the basic principle of constructing, reconstructing, widening, and maintaining the State system exclusively from State funds under complete control of the State highway department.

Population trends for areas of considerable size generally change slowly and can be closely measured. Future population can be predicted with reasonable accuracy and serves, therefore, as a reliable method of anticipating future traffic requirements.

In planning highway improvements the distribution of population is important. Highway requirements of an area comprising a few large cities and very sparse population tributary to these cities are quite different from those of an area having a relatively uniform distribution of population within the area.

Distribution of population by townships and cities or villages of over 2,500 persons in 1920 is shown on Figure 8. The large areas of the State having less than 40 persons per square mile are

evident; 80 per cent of the area of the State has a population of less than 80 persons per square mile, and in this 80 per cent of the area only 22.7 per cent of the total population of the State resides.

A comparison of population per square mile and area in the five traffic sections is shown in Table 30.

Classified on the basis of township units, 9.4 per cent of the area of the State has a population of

160 or more persons per square mile, and includes 69.3 per cent of the population. In the most densely populated divisions of the State, northeastern A, southwestern A and northwestern A, over 90 per cent of the total population resides in areas having a population density of 160 or more per square mile and only from 0.2 to 1.8 per cent of the population lives in areas having less than 40 persons per square mile. In contrast to these are the areas of lowest population, east-central B,

Table 30—Area and Population of the Five Traffic Sections Classified by Density of Population per Square Mile in 1920

	Per cent o	of total area per square	having a p	opulation .	Per cent of total population residing in areas having a population per square mile of—					
Section	0–39	40-79	80–159	160 and over	0–39	40–79	80–159	160 and		
. Northeastern:	26.1	38.1	13.1	22.7	1.8	. 4.9	3.2	90.1		
A	35.9	40.6	15.5	8.0	7.5	14.8	10.9	66.8		
B	64.1	21.0	8.6	6.3	28.4	16.1	11.8	43.7		
Total	36.1	36.3	13.3	14.3	4.2	7.5	5.2	83.1		
I. Southwestern:										
A	17.1	27.1	14.7	41.1	1.0	2.7	2.4	93.9		
В	28.6	42.5	18.3	10.6	7.4	17.2	14.1	61.3		
Total	22.6	34.5	16.5	26.4	2.1	5.1	4.4	88.4		
III. East-central:	,			16.0	7.2	11.0	14.7	66.1		
A	37.1	29.5	16.6	16.8	7.3	11.9 26.3	15.8	18.0		
В	66.2	24.3	7.8	1.7	39.9	20.3	13.0			
Total	47.5	27.6	13.5	11.4	12.7	14.2	14.9	58.2		
IV. Northwestern:			4 0	20.4		6.4	2.9	90.5		
A	4.2	60.4	15.0	20.4	0.2	19.1	13.9	52.9		
B	46.2	36.3	13.8	3.7	25.6	29.6	14.9	29.9		
C	50.6	35.3	9.1	3.0	25.0	27.0				
Total	48.1	36:5	10.0	5.4	17.3	22.1	11.6	49.0		
V. Southern:								70.0		
A	1	16.0	0.0	9.0	20.3	8.9	0.0	70.8		
В		37.2	7.2	6.4	20.2	25.3	13.5	23.7		
C	54.6	34.6 ·	6.6	4.2	29.3	33.2	13.0	23.1		
Total	54.5	34.2	6.4	4.9	26.1	28.9	12.5	32.5		
State total	45.4	34.6	10.6	9.4	9.7	13.0	8.0	69.3		



The elimination of dangerous grade crossings on the heavily traveled State routes is a pressing need

southern C and northwestern C, in which over 50 per cent of the area has a population density of less than 40 persons per square mile, and from 1.7 to 5.0 per cent of the area has a population of 160 or over per square mile in which from 18.0 to 29.9 per cent of the population resides.

These variations indicate marked differences in the demand for highway service. In the densely populated areas a highway system designed to carry a large volume of traffic between important centers of population with tributary feeder routes will be required. These routes must be of sufficient width and of a type adequate to carry a large daily volume of traffic, including trucks and busses. Such routes should be as direct as possible and all obstructions to the free and rapid movement of traffic, such as railway crossings at grade, sharp curves, heavy grades and congested traffic areas in small cities and villages or near large cities, should be avoided.

Traffic produced in the sparsely populated sections of such an area will be relatively unimportant and can be served by short "feeder" routes connecting with the main highways.

In the sparsely populated areas the volume of traffic is smaller and its sources more scattered. Routes carrying a large volume of traffic are limited to a small number of through routes and to the immediate vicinity of the more important cities and villages.

The mileage of highway which should be included in the State highway system, i. e., routes of general State importance, forms a smaller pro-

portion of the total highway mileage in the sparsely populated regions than in the densely populated areas. Highway width in excess of a normal two-lane road is rarely required in the low traffic areas, the need for improvements superior to gravel is limited, and the justifiable expenditure for removal of obstacles to the rapid movement of traffic is relatively small. The primary traffic need in these relatively unimportant traffic areas is for a mileage of serviceable highways, only the more important of which are of sufficient importance to warrant inclusion in the State highway system.

The cost per vehicle-mile of providing high-way service in the low traffic areas of the State is high as compared with the cost in the heavy traffic areas. In spite of these higher costs, principles of State development and traffic service make the inclusion of a connected system of principal highway routes in the low traffic areas a proper function of the State. The mileage of State highways can, however, be lower in proportion to area in low traffic areas than in the heavy traffic areas.

During the period 1910 to 1920 the population of the State increased 20.8 per cent. This increase, however, was far from uniform throughout the State. Urban population—population residing in cities and other incorporated places having 2,500 inhabitants or more—increased 38.0 per cent, and rural population decreased 0.9 per cent.

Reference to Figure 8 will indicate that the areas increasing in population are generally the



A typical grade crossing elimination

areas having a large present density of population. In the areas of low population a large part of the area is decreasing in population and many areas decreased more than 10 per cent during the period from 1910 to 1920. Areas in these sections that increased in population are principally townships including the smaller cities and villages.

An analysis of the increase and decrease of

population in the State between 1910 and 1920, by townships is shown in Table 31.

Of the total increase in population in the State between 1910 and 1920, 83.3 per cent was in the sections of dense population—northeastern A, southwestern A and northwestern A. In these same sections from 69.9 per cent to 76.3 per cent of the total area is increasing in population.

Table 31—Rate of Increase in Population, Distribution of Increase, and Percentage of Area Increasing and Decreasing in Population 1910-1920¹

		Per cent of total	Per cent of a	rea of section
Section	Per cent increase in population 1910–1920	increase in population	Increasing in population	Decreasing in population
Northeastern:		67 A	76.3	23.7
AB	55.5 19.8 9.0	67.4 9.2 0.9	29.0 48.5	71.0 51.5
Total	43.6	77.5	53.4	46.6
I. Southwestern: A B	13.7 13.6	9.6 2.0	69.9 58.4	30.1 41.6
Total	13.7	11.6	64.3	3.5 . 7
II. East-central; A B	11.9 -0.9	4.5 -0.1	45.8 19.3	54.2 80.7
Total	9.6	4.4	. 36.4	. 63.6
V. Northwestern: A	28.2 8.1 -1.0	6.3 1.2 -0.7	71.6 30.3 21.4	28.4 69.7 78.6
Total	6.6	6.8	24.6	75.4
V. Southern: A	29.7 2.6 -4.7	1.4 0.5 -2.2	55.4 21.9 16.5	44.6 78.1 83.5
Total	-0.4	-0.3	19.9	80.1
State total	20.8	100.0	34.0	66.0

¹ Minus sign indicates a decrease in population.

The three sections having the lowest present density of population—east-central B, southern C and northwestern C—are all decreasing in population. In these sections only 16.5 per cent to 21.4 per cent of the area is increasing in population.

If the trend of population between 1910 and 1920 continues, and it may reasonably be expected to continue, although the rates of increase or decrease may slowly change, the greatest increase in traffic will be found in the densely populated areas.

In small areas of sparse population surrounded by or contiguous to centers of population, traffic originating in these centers will dominate the highways of the small areas and traffic will increase rapidly, but in the larger areas of sparse population, particularly parts of the southern and northwestern sections, a rapid increase in traffic is not expected.

A continuous program of highway improvement is required in all parts of the State, but the most important as well as the most difficult problems of such improvement will be found in the densely populated areas. In the sparsely populated areas a highway of normal two-lane width provided with a surface adequate to carry the volume of traffic using the particular highway will meet traffic requirements for a considerable period of years. In the densely populated areas the planning of State and county highway systems which will economically serve the rapidly increasing volume of traffic should include the construction of the best types of highway surfaces, the provision of proper highway width, the acquisi-

tion of new right of way for relocations and for alternative or parallel routes as required, the elimination of railway grade crossings, reduction of grades and elimination of traffic congestion points. Adequate planning of highway facilities in the vicinity of large population centers also requires



Congestion on State Route 163 in Oak Harbor

the provision of "by-pass" routes for traffic desiring to avoid congested city streets. Such "by-pass" routes are required for the important through routes around the larger cities and also around the smaller cities and villages on the heavy traffic routes connecting important terminal areas. The economical and efficient execution of such a program requires the anticipation of future traffic needs and the planning at the present time of projects that will be required over a period of several years. The area within which such intensive planning is required constitutes a relatively small part of the State of Ohio, is limited to the main routes of travel, and on these routes it lies principally in proximity to the larger cities.

FORECAST OF HIGHWAY TRAFFIC

ROPOSED new construction, reconstruction and widening in Ohio should be planned to provide service for future traffic as well as for present traffic. The building of a highway which will not meet traffic demands during the expected life of the improvement will result in traffic congestion and early reconstruction and is an uneconomic investment of public funds. Building in excess of the traffic needs of any route is undesirable, since it requires an outlay of public funds which could be used more advantageously for other highway improvements. The principle of stage construction in highway development is a conservative method of adjusting highway improvement to traffic needs when the trend of traffic increase is unknown. A knowledge of future traffic, in so far as it can be predicted with reasonable accuracy, is, however, essential in the establishment of a sound plan of highway improvement.

A forecast of traffic based directly upon past traffic trends is not possible, since there is no historical series of highway traffic records in Ohio. Such records are available in the States of Maine, Maryland, Massachusetts, Michigan and Wisconsin. These series are of varying length, ranging from records made at three-year intervals between 1909 and 1924 in Massachusetts to annual series beginning between 1916 and 1920 in the other States. Although relatively short, these series cover the major part of the period of rapid increase of motor vehicle traffic on the highways of these States. The rapid changes in motor vehicle development and use would impair the value of earlier records even if such records were available.

Highway traffic and motor vehicle registration in each of these States have increased at approximately equal rates, as shown in Figure 31.8 The great variations in industrial and agricultural development, in population, in motor vehicle registration and in the period of the series apparently

*For a detailed presentation of highway traffic and motor vehicle registration data in each of these States see "Report of a Survey of Transportation on the State Highway System of Connecticut," 1926; and "The Maine Highway Transportation Survey, Public Roads, Vol. 6, No. 3, May, 1925.

has had no effect upon the relationship between the rates of traffic increase and motor vehicle registration growth.

In the absence of any comprehensive historical series of traffic records in Ohio it has therefore been assumed that highway traffic in Ohio is increasing directly with the increase in motor vehicle registration.

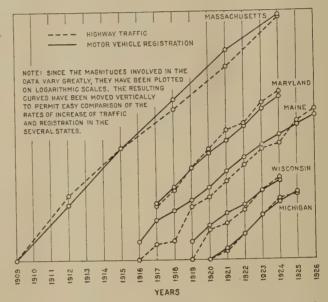


Fig. 31—Trends of Highway Traffic and Motor Vehicle Registration in Massachusetts, Maryland, Maine, Wisconsin, and Michigan

The increase of motor vehicle registration is a function of two variables: (1) The increase in population; and (2) the increase in ownership and use of motor vehicles in proportion to population, measured by the number of persons per motor vehicle. The past trend of both of these factors may be determined from available records.

Population changes are measured accurately by the decennial census and intercensal estimates made by the Bureau of the Census. Population by years as estimated by the Bureau of the Census from 1913 to 1923 and estimates calculated by extension of the Census method for 1924 to 1930 and for 1935 are shown in Table 32.

The growth of motor vehicle registration in proportion to population, i. e., the decrease in persons per car, appears to follow the same general characteristics as the growth of population, an

Table 32—Comparison of Population and Number of Motor Vehicles in the State of Ohio

Year	Registration	(thousands)	Population ¹	Persons per car			
Ital	Actual	Estimated	(thousands)	Actual	Estimated		
913	86	86	5,095	59.24	59.24		
914	123	127	5,197	42.60	40.92		
915	181	179	5,299	29.28	29.60		
916	252	245	5,402	21.44	22.05		
917	347	324	5,504	15.86	16.99		
918	413	416	5,606	13.57	13.48		
919	511 -	521	5,708	11.17	10.96		
920	621	637	5,810	9.36	9.12		
921	721	763	5,913	8.20	7.75		
922	859	897	6,015	7.00	6.71		
923	1,069	1,038	6,117	5.72	5.89		
924	1,242	1,181	6,219	5.01	5.27		
925	1,3462	1,329	6,321	4.70	4.76		
926	1,4802	1,475	6,424		4.36		
927,		1,621	6,526		4.03		
928		1,763	6,628		3.76		
929		1,902	6,730		3.54		
930		2,035	6,833		3.36		
935		2,607	7,344		2.82		

¹ Population as of July 1, of each year.

² Data not available when forecast was made. Estimate differs by 1.3 per cent from actual value in 1925, and by 0.3 per cent in 1926.

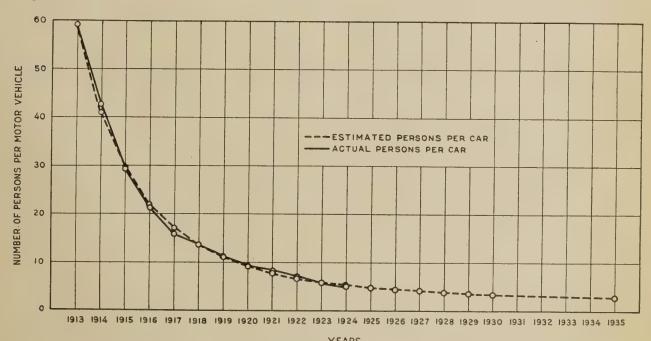


Fig. 32—The Number of Persons per Car in Ohio for the years 1913 to 1935 (Based on Estimated Population for Intercensal Years)

early growth slow in number of vehicles but rapid in rate of increase followed by a gradual decrease in the rate of growth.

The number of persons per car in Ohio during the years 1913 to 1925 and the extension of the trend of persons per car to 1935 is shown in Figure 32. The estimated number of persons per car for each year is shown in Table 32.

Combining estimated population and estimated number of persons per car for each year the predicted registration for each year is obtained. These estimates are also shown in Table 32.

On the basis of these predictions it is estimated that motor-vehicle registration in 1930 will be 2,035,000, with 3.36 persons per car, and in 1935, 2,607,000, with 2.82 persons per car. The increase in motor-vehicle registration between 1925 and 1930 is therefore expected to be 51 per cent and the increase between 1930 and 1935, 28 per cent.

The rate of population change varies greatly in different sections of the State, as does also the present number of persons per car.9

The rates of decrease in persons per car within these areas, however, follow the same principle and are therefore in close agreement.

To allow for differences in the rate of population change and for differences in the present number of persons per car in the various sections of the State, the number of persons per car, based on estimated population and actual motorvehicle registration in 1925 were obtained for each county of the State. To this 1925 value for each county was applied the rate of decrease in persons per car for the State between 1925 and 1930. The estimated registration for each county in 1930 was calculated by applying the estimated number of persons per car in 1930 for each county to the estimated 1930 population of that county. From the actual county registration in 1925 and the estimated registration in 1930 the percentage increase in registration for the county was computed. This method results in the same total for the State and reflects differences in motor-vehicle registration in 1925, as well as differences in rates of population growth in the 88 The expected county registration growth, 1925 to 1930, varies from 41.3 to 74.9 per cent, the latter rate resulting from a rapid rate of population increase.

Since traffic increases at the same rate as motorvehicle registration the expected traffic at each survey station was determined by applying the county rate of registration increase to each traffic station in the county. The resulting forecast of traffic at each station is shown in Appendix III

Industrial and suburban development, as well as changes affecting the present highway system as to location of routes, routing of traffic and detours and condition of improvement, influences traffic on short sections of highway and it is not expected that these estimates will in all cases reflect exactly the actual traffic in 1930, but it is believed that they will reflect with reasonable accuracy highway traffic on the State highway system as a whole.

In certain areas, particularly areas of sparse population adjacent to centers of population, a very important part of the traffic originates in the centers of population. In such cases a traffic forecast based on the population and motor-vehicle registration in the sparsely populated area will not reflect the influence of traffic originating outside the county boundaries.

To allow for such variations, and also because population estimates based on arithmetical progressions 10 are less accurate when applied to smaller areas and when forecasted over a greater number of years, the traffic forecast for 1935 was computed on the basis of the State increase in registration between 1930 and 1935 rather than for increases in each county. The 1935 forecast therefore represents an increase of 28 per cent over the forecast in 1930 for all sections of the State. Because of the longer period of time and the greater probability of changes in the rate of population growth, in motor vehicle use, and in the State highway system, the traffic forecast for 1935 is expected to be less accurate than the forecast for 1930. It has therefore been applied to highway sections rather than to individual points and is expected to reflect traffic conditions in 1935 within the limits of accuracy required in the establishment of a sound plan of highway improvement.

See "Highway Traffic and Population," p. 57.

¹⁰ The method used by the Bureau of the Census.

TRAFFIC CLASSIFICATION OF THE OHIO STATE HIGHWAY SYSTEM

HE scientific improvement of highways in a manner consistent with the conditions to be met during the life of the improvements must be based on a number of factors. The fundamental purpose of any highway improvement is adequate service for the volume and type of traffic which is using and will use the highway. Soil, subgrade, drainage, climatic and other physical conditions have a decided influence on the traffic capacity of a given class of improvement. The type and design selected for a given highway improvement should be the type and design which will economically serve present and expected traffic under existing soil, subgrade, drainage, climatic and other physical conditions. Construction of a highway in excess of these needs or inadequate for them is a violation of the principle that the improvement should be such as to provide maximum traffic service at a minimum total cost. Total cost involves construction costs, maintenance and repair costs, life of pavement, and vehicle operating costs.

To provide the basis for a scientific planning of the highway improvement program a traffic classification of the Ohio State highway system, based on present and expected total traffic, truck traffic, large-capacity trucks, and special traffic such as motor busses, has been established.

As a basis for the plan of highway improvement, the State highways are classified in three groups designated as major, medium and minor traffic highways, according to their average daily traffic. Routes or sections of routes carrying 1,500 or more motor vehicles per day are classed as major routes; those carrying 600 to 1,500 vehicles per day are classed as medium routes; and those carrying less than 600 vehicles daily are classed as minor routes. The routes or sections of routes are classified in this way on the basis of the observed 1925 traffic, and the estimated traffic for 1930 and 1935 is employed in a similar manner to indicate the probable classification in those years.

Highways classed as major sections include, in addition to the roads carrying 1,500 or more vehicles in 1925, those sections carrying less than 1,500 in 1925 but which are expected to carry 1,500 or more vehicles in 1930, and similarly in 1930, in addition to the sections actually carrying at that time 1,500 or more vehicles there are included as major traffic highways those which are expected to carry that number in 1935.

A similar method is employed in classifying the highways of the medium traffic group; which includes sections actually carrying between 600 and 1,500 vehicles per day in 1925 and expected to carry that number in 1930.

Minor traffic highways are those which are expected to carry less than 600 daily vehicles in 1925 and 1930.

The traffic classes shown in Figure 33 are as follows:

Classification	Average daily motor vehicles							
Classification	1925	1930	1935					
Major 1	1,500 or more	1,500 or more	1,500 or more					
Major 2	600-1,500	1,500 or more	1,500 or more					
Major 3	600—1,500	600—1,500	1,500 or more					
Medium 1	600—1,500	600—1,500	6001,500					
Medium 2	less than 600	600—1,500	600-1,500					
Minor 1	less than 600	less than 600	600—1,500					
Minor 2	less than 600	less than 600	less than 600					

All sections expected to carry 1,500 or more motor vehicles per day by 1935 are classed as major, since any proposed construction or reconstruction project on these sections will carry in excess of 1,500 motor vehicles during all or a substantial part of the expected life of the improvement.

Sections carrying between 600 and 1,500 motor vehicles per day in 1925 or expected to carry this volume of traffic by 1930 are classed as medium, since proposed improvements on these sections will carry in excess of 600 motor vehicles per day during the major part of the expected life of the improvement.

Sections carrying less than 600 vehicles per day in 1925, and not expected to carry more than 600 vehicles per day until after 1930, are classed as minor on the theory that proposed improvements in the immediate future will not be required to carry in excess of 600 vehicles for a period of at least five years and that improvements superior to gravel are not in general justified at the present time since present minor-type improvements can be utilized at least partially for higher type improvements when required.

The above traffic limits are based primarily on present practice and, as regards the limit between the major and medium classes, are confirmed by a study of surface maintenance costs on various types of surface in Ohio.

The traffic classification 11 of each section of

¹¹ On sections of highways where the daily volume of traffic during 1925 was abnormal due to construction, detours or condition of present improvement, normal traffic was estimated and the traffic classification was based on this estimate. Sections on which traffic classification was estimated are indicated by a broken line in Figure 33.

the State highways is shown in Figure 33 and the highways in each class are listed in Appendix XIII. The mileage of highways of each class in each of the three years, 1925, 1930, and 1935, is shown in Table 33.

Experience in many States indicates that ordinary gravel and similar surfaces can not be economically maintained when the traffic materially exceeds 500 to 600 vehicles per day and similar experience in Ohio, when it exceeds approximately 600 vehicles per day. Above that traffic density the type and design of surface required is largely a function of the frequency of heavy loads, the choice of types including bituminous types for the lower densities and the several pavement types for the roads of greater traffic density.

If, on the basis of this experience, those sections of the Ohio State highway system which carry a traffic of 600 or more vehicles per day be considered as requiring a type of surface superior to gravel, it is found that in 1925 over one-third of the 11,000 miles of the State system, or 3,852 miles require such surfaces and ten years later in 1935, based on the forecast of expected traffic, approximately half the system, or 5,221 miles, should be so improved.

From 1925 to 1935 there is a continual shift of sections from the minor to the medium class and finally to the major traffic classification. A little more than eight per cent of the State system is classified as major in 1925. It is estimated that by 1930 the mileage of highways of major traffic significance will be nearly double that of 1925; and the mileage of this class in 1935 will be approximately 2.7 times that of 1925. Medium

Table 33—Traffic Classification of Ohio State Highways

Class	19	225	19	930	1935		
	Miles	Per cent	Miles	Per cent	Miles	Per cent	
Major	947 2,905 7,148	8.6 26.4 65.0	1,709 3,512 5,779	15.6 31.9 52.5	2,512 2,709 5,779	22.9 24.6 52.5	
Total	11,000	100.00	11,000	100.00	11,000	100.00	





Table 34-Traffic Classification of Mileage in the Five Traffic Sections

	T									
				Tra	ffic classif	ication				
Section		Major			Mediun	1		Minor		Total
	1925	1930	1935	1925	1930	1935	1925	1930	1935	-
Northeastern	147	857 251	1,089 304	1,081 239	1,128 218	896 165	1,218	836 267	836 267	2,821
East-central. Northwestern. Southern.	176	187 337 77	299 597 223	361 786 438	360 1,033 773	248 773 627	839 2,440 2,301	738 2,032 1,906	738 2,032 1,906	1,285 3,402 2,756
Total	947	1,709	2,512	2,905	3,512	2,709	7,148	5,779	5,779	11,000
			Per cen	t of mile	age of sec	tion	1		<u> </u>	
Northeastern Southwestern East-central	20.0	30.4 34.1 14.6	38.6 41.3 23.3	38.3 32.5 28.1	40.0 29.6 28.0	31.8 22.4 19.3	43.2 47.5 65.3	29.6 36.3 57.4	29.6 36.3 57.4	100.0 100.0 100.0
Northwestern	5.2 0.6	9.9	17.6	23.1 15.9	30.4 28.0	22.7	71.7 83.5	59.7 69.2	59.7 69.2	100.0
		1	Per ce	nt of S	tate mile	age		1		
Northeastern	4.7 1.3 0.8	7.8 2.3 1.7	9.9 2.8 2.7	9.8 2.2 3.3	10.2	8.1 1.5 2.3	11.1 3.2 7.6	7.6 2.4 6.7	7.6 2.4 6.7	25.6 6.7 11.7
Northwestern	0.2	3.1	5.4 2.1	7.1	9.3	7.0 . 5.7	22.2 20.9	18.5 17.3	18.5	30.9 25.1
Total	8.6	15.6	22.9	26.4	31.9	24.6	65.0	52.5	52.5	100.0
		Per cer	nt of clas	sified mi	leage in e	ach section	on	1	1	
Northeastern. Southwestern. East-central. Northwestern. Southern.	55.1 15.5 9.0 18.6 1.8	50.1 14.7 11.0 19.7 4.5	43.3 12.1 11.9 23.8 8.9	37.2 8.2 12.4 27.1 15.1	32.1 6.2 10.3 29.4 22.0	33.1 6.1 9.2 28.5 23.1	17.1 4.9 11.7 34.1 32.2	14.5 4.6 12.8 35.1 33.0	14.5 4.6 12.8 35.1 33.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

traffic highways increase from approximately 26 per cent of the total in 1925 to nearly 32 per cent in 1930 and decrease to about 24 per cent in 1935. The decrease in medium classification mileage between 1930 and 1935 is explained

by the increase in major class sections during this period without a corresponding increase in the medium class sections. Minor traffic highways decrease from two-thirds of the mileage in 1925 to one-half the total mileage in 1930 and 1935.

The distribution of major, medium and minor traffic routes in 1925, 1930 and 1935 by sections of the State is shown in Table 34.

A comparison of the classified mileage within these sections of the State indicates the importance of the northeastern and southwestern sections in major class mileage. In the southwestern section, in 1925, one-fifth of the highways are of the major traffic class, and in the northeastern section 18.5 per cent, as compared with 6.6 per cent in the east-central section, 5.2 in the northwestern section, and but 0.6 per cent in the southern section. In 1930 and 1935 the percentage of mileage in the major class increases in all sections, but the east-central, northwestern and southern sections remain low as compared with the northeastern and southwestern sections.



A macadam road near Centerburg in need of repair as a result of recent heavy hauling

In 1925, 55.1 per cent of the major traffic mileage of the State, 522 miles, was in the northeastern section; in 1930 the corresponding percentage is expected to be 50.1 and in 1935, 43.3 per cent.

The northeastern and southwestern sections with 32.3 per cent of total State highway mileage had, in 1925, 70.6 per cent of the major traffic mileage, and will have in 1930, 64.8 per cent, and in 1935, 55.4 per cent.

Major traffic mileage in the southern section is less than one per cent of the State highway mileage in the section in 1925 and only 8.1 per cent in 1935.

The mileage of major and medium classification in 1930 which is not now improved with surfaces superior to gravel affords a reliable index to the need for new improvements during the next few years.

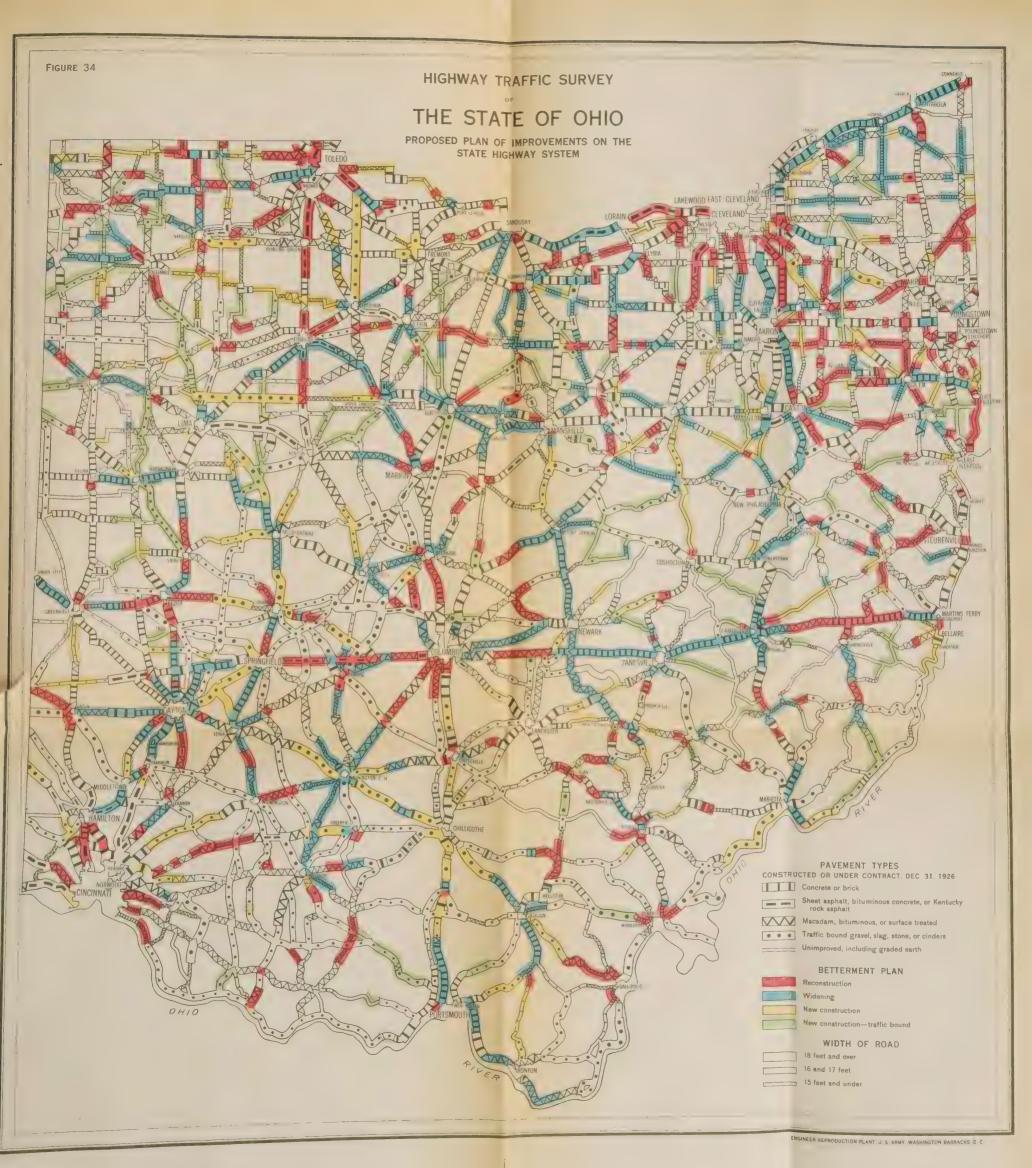
The mileage shown as improved with types superior to gravel in Table 35 includes all highways now having such surfaces regardless of condition or present surface width. Included in this mileage is a considerable mileage of surfaces in poor condition which must be reconstructed to provide adequate highway service, and a large mileage of narrow surfaces which must be widened in order to serve present and expected future traffic.

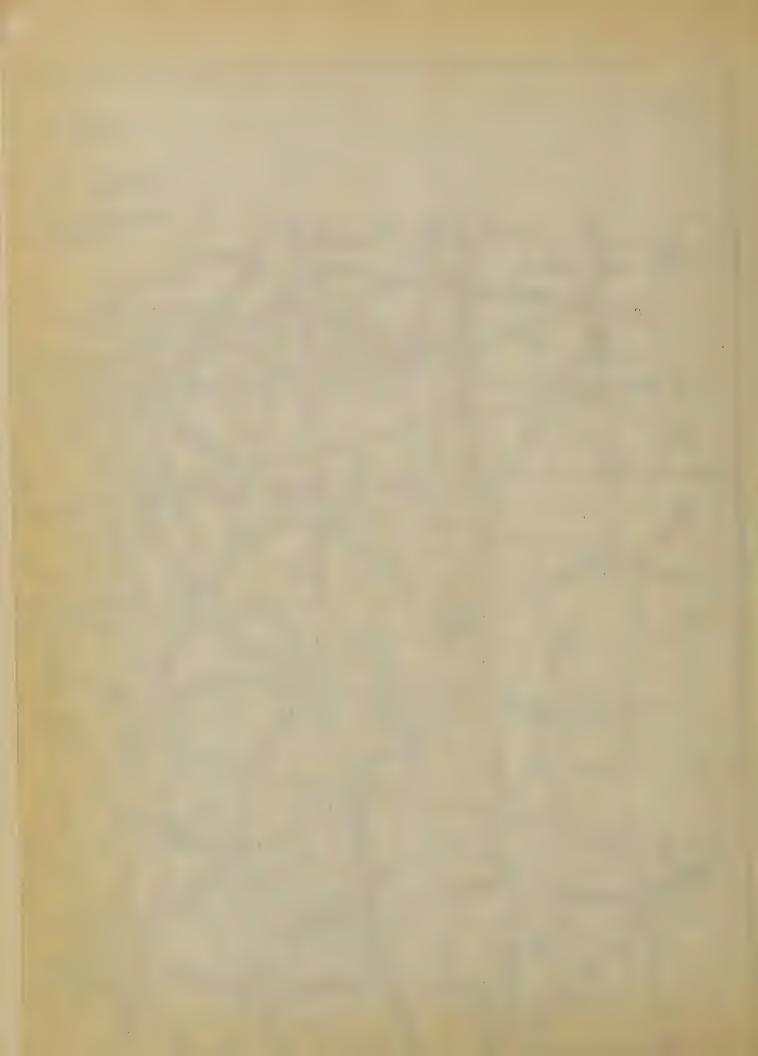
In the east-central, northwestern and southern sections over half the total State highway mileage of the section is expected to remain in the minor traffic class in 1935.

Comparison of the mileage classified as major or medium traffic routes in 1930 (Table 35) with the present mileage of improvements in these classes indicates the need for an extensive program of new construction during the next few years.

Table 35—Comparison of the Mileage of Surfaces Superior to Gravel in 1925 and the Mileage of 'Major and Medium Traffic Classification in 1930

Section	Mileage of major and medium classification 1930	Mileage of major and medium classification improved with surfaces superior to gravel 1925	Mileage of major and medium classification not improved with surfaces superior to gravel 1925
Northeastern	1,985 469 547 1,370 850	1,160 282 323 620 303	825 187 224 750 547
Total	5,221	2,688	2,533





THE OHIO PLAN OF HIGHWAY IMPROVEMENT

NALYSIS of the II,000 miles of State highways, considering present improvements and their condition, and present and estimated future traffic, indicates that 4,521 miles of new construction, reconstruction and widening of highways, to a minimum of 18 feet, will be necessary to meet traffic requirements during the five-year period from January I, 1927, to December 31, 1931.

The location of the proposed new construction, reconstruction and widening of present surfaces is shown in Figure 34, which also shows the type and width of highway improvements as of December 31, 1926.

Of the 4,521 miles included in the proposed improvement program, shown in Table 36, 1,707 miles, 37.8 per cent of the total plan mileage, is classed as new construction, of which 1,007 miles represents construction of surfaces superior to gravel and 700 miles construction of traffic-bound improvements on minor traffic routes; 1,220 miles, 27.0 per cent, reconstruction of old worn-out surfaces; and 1,594 miles, 35.2 per cent, widening of narrow surfaces.

It is estimated that the proposed plan of high-way improvement, exclusive of bridges and the separation of railroad grade crossings, will cost approximately \$100,000,000.

The urgent need for widening of present surfaces is indicated by the fact that there were on the State system, in 1925, approximately 4,800 miles of surfaces superior to gravel less than 18 feet in width, of which approximately 1,400 miles were from 10 to 15 feet in width. On light traffic routes, where the present width is between 16 and 18 feet and the surface is in good condition, widening of present surfaces can well be deferred to a later period and, therefore, this mileage is not included in the proposed widening program. There is also included in the plan a limited mileage of present pavements, 18 feet in width, which require additional width to serve present and expected traffic.

The five-year new construction, reconstruction, and widening program involves 41.1 per cent of the total State highway mileage. The remaining 58.9 per cent, 6.479 miles, consists of surfaces in

Table 36—Proposed Ohio Five-year New Construction, Reconstruction and Widening Program and Estimated Improvement Cost

Class of improvement	Miles	Per cent	Estimated cost ²	Per cent
New construction		37.8	\$41,122,000 \$34,443,000 6,679,000	41.2
Reconstruction	1,220	27.0	35,188,000	35.2
Widening	1,594	35.2	23,644,000	23.6
Total	4,521	100.0	\$99,954,000	100.0

¹ New construction is defined as construction on present unimproved sections of highways and sections where the present surface cannot be salvaged because of its present condition, location or alignment. The selection of surfaces for this new construction will be based on traffic and physical conditions. Reconstruction is defined as the rebuilding of worn-out surfaces with the same or a superior surface type. Widening is defined as the extension of present surfaces to a minimum of 18 feet and a greater width where required. In general, surfaces 16 to 18 feet in width on minor traffic routes are not included in the widening program. If the condition of the surface requires reconstruction they have been included in the reconstruction program. The distinction between widening and reconstruction is not clear in many cases but for the larger part of the reconstruction mileage the condition of the surfaces is such as to require rebuilding. Where the surfaces are narrow, reconstruction will also include widening of the surface.

² The estimated cost of each of the three classes of improvement was made by estimating the cost of grading, minor structures exclusive of bridges, and the approximate surface type required for the subgrade conditions and estimated future traffic on each mile of the proposed plan.

satisfactory condition and adequate for expected traffic during the next five years.

The mileage of proposed new construction, reconstruction, and widening in the five traffic sections is shown in Table 37.



Landslides are a serious problem for the roadbuilder in southern Ohio

The improvement program is distributed over the entire State, including from 29.3 to 53.6 per cent of the total State highway mileage in each section.

The northeastern section of the State is the most important total traffic (fig. 8) and motor trucking area (figs. 8 and 14), and contains the largest amount of major traffic mileage.

In the southwestern section the ratio of major traffic mileage to total State mileage is higher than in the northeastern section, but this section is smaller in area and in road mileage and is therefore second in importance to the northeastern section.

In these two sections a considerable part of the total mileage is now improved with surfaces superior to gravel, and the proposed new construction, because of the density of traffic on the highways of these areas, will be primarily major traffic improvements. The proposed traffic-bound improvements in the northeastern section are located in the sparsely populated parts of the section, and are on routes of local rather than State-wide importance.

In the east-central and northwestern sections new construction is almost equally divided between the higher types of surfaces and traffic-bound improvements. The construction of types superior to gravel is largely limited to routes in the vicinity of the larger cities and to the principal through routes, and traffic-bound construction to the routes which carry principally a small volume of local traffic.

In the southern section the extensive trafficbound construction program completed during the

Table 37—Proposed New Construction, Reconstruction, and Widening Program in the Five Traffic Sections

				New construction				Reconstruction		Widening	
Section St high	Total State highway	Total improvement program		Surfaces superior to gravel		Traffic-bound					
	mileage	Miles	Per cent of total miles	Miles	Per cent of total miles	Miles	Per cent of total miles	Miles	Per cent of total miles	Miles	Per cent of total miles
Northeastern	2,821 736 1,285 3,402 2,756	1,511 269 574 1,360 807	53.6 36.6 44.7 40.0 29.3	295 53 122 252 285	10.5 7.2 9.5 7.4 10.3	167 124 332 77	5.9 9.6 9.8 2.8	496 88 132 306 198	17.6 12.0 10.3 9.0 7.2	553 128 196 470 247	19.6 17.4 15.3 13.8 9.0
Total	11,000	4,521	41.1	1,007	9.1	700	6.4	1,220	11.1	1,594	14.5

past few years is evident in the relatively small additional mileage of traffic-bound construction planned for this region. The proposed construction of surfaces superior to gravel in this section is relatively large because of the present small mileage of such types and is limited largely to a few important traffic routes.

The reconstruction program is relatively largest in the northeastern section and smallest in the southern section, reflecting the traffic density in the five sections.

The northeastern section, with approximately one-fourth of the total State highway mileage, has 40 per cent of the reconstruction program.

important traffic routes. The widening of surfaces now 16 feet in width on the routes of minor traffic importance although desirable has been deferred until more necessary improvements have been completed. The widening program, however, includes the widening of a considerable mileage of extremely narrow surfaces (10 to 12-foot widths) on routes of medium and minor traffic importance.

The proposed plan of highway improvement, as shown in Figure 34, reflects, in general, the highway traffic classification for 1925 and 1930 as shown in Figure 33. The 1935 classification is of particular value in the selection of surfaces



Concrete through-arch bridge over the great Miami River at Piqua on the Piqua-Urbana road, State Route 29

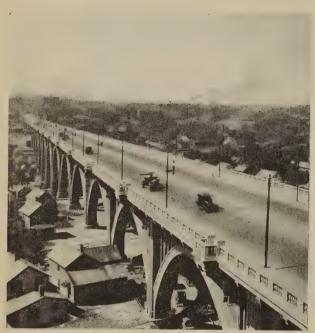
This large program is required to replace with modern improvements the large mileage of the older, badly worn surfaces which are very expensive to maintain under their present traffic.

The widening program is dependent upon traffic density and earlier construction practices. The largest widening program is required in the northeastern section, followed in order by the southwestern, the east-central, the northwestern and the southern sections.

In the northeastern and southwestern sections the widening program includes widening in excess of 18 feet on a relatively small mileage of very heavy traffic routes as well as extension of present narrow surfaces to 18 or 20 feet on other for the more durable classes of improvement. Present condition of surfaces and existing soil, subgrade, drainage, climatic and other physical conditions as well as present and expected traffic must be considered in the detailed planning of specific improvements.

The above estimate of permanent improvements required during the next five years does not include the cost of major structures such as bridges and grade separations at railroad crossings. It is estimated that \$8,000,000 will be required for bridge construction during this period.

The elimination of railroad grade crossings on the State highway system, particularly on the major and medium traffic routes, presents a criti-



North Hill Viaduct at Akron, Ohio. Length, 2,800 feet; roadway, 52 feet; built 1921

cal problem requiring early solution. There are at present more than one thousand crossings at grade on the State highway system outside of municipalities, many of which constitute serious traffic hazards. It is estimated that approximately \$16,000,000 will be required for necessary grade crossing elimination during the next five years. Approximately 50 per cent of this cost will be assessed against the railroads, making the expenditure of public funds approximately \$8,000,000. For maintenance and repair of the State highway system approximately \$53,000,000 will be required during the five-year period. Administra-

tion costs for the same period will approximate \$3,000,000.

The plan of highway improvement has been based upon a detailed analysis of the present condition of highway surfaces and present and expected traffic. Contingencies which can not be foreseen will undoubtedly arise and it is therefore believed desirable to include a contingency fund of \$5,000,000 for the five-year period.

A summary of budget requirements for the five-year period, January 1, 1927, to December 31, 1931, is shown in Table 38.

It is believed that the proposed plan of highway improvements and budget requirements for the five-year period will provide adequate highway service for the large and increasing volume of traffic using the State highway system and that they are at the same time commensurate with the dictates of financial economy which must always govern the expenditure of public funds.



One of the few surviving covered bridges. This one is on the National Road near Hebron

Table 38—Estimate of Budget Requirements for the State Highway System, January 1, 1927, to December 31, 1931, Prepared by Ohio State Department of Highways

		9 7
Item -	Estimated total cost	Funds required by State highway department
New construction, reconstruction and widening of highway surfaces. Bridge construction Railway grade crossing elimination. Maintenance and repair. Administration Contingency fund.	8,000,000 16,000,000 ¹ 53,000,000 3,000,000	\$100,000,000 8,000,000 8,000,000 53,000,000 3,000,000 5,000,000
Total	\$185,000,000	\$177,000,000

¹ To be shared equally by the State and railroad companies involved.

APPENDIX I

MOTOR TRUCK TRANSPORTATION OF COMMODITIES

Products of manufacture form the principal class of commodities transported over the State highways of Ohio. There are engaged in the transportation of this class of commodities 55.9 per cent of all loaded trucks operating over the State highway system. The most important individual commodities in this class are bakery goods, groceries, beverages and bottles, used furniture and household goods, wooden containers, and empty cans. Together, these commodities comprise 47.8 per cent of all truck loads of products of manufacture.

Table 39 shows the comparative importance of the several classes of commodities with respect to the number of trucks loaded with each, the net tonnage of commodities carried, and average length of haul.

Table 39—Commodities transported on Ohio State highways

Commodity class	Loaded trucks	Net tons ¹	Average length of haul
Products of manufacture Products of animals Products of agriculture Products of mines Products of forests Miscellaneous	Per cent 55.9 14.3 10.5 8.5 3.3 7.5	Per cent 46.6 12.7 9.2 16.9 4.4 10.2	Miles 36 28 27 8 20 48
Total	100.0	100.0	32

¹ Includes net tonnage hauled by trailers.

Products of animals are next in importance to manufactured products, comprising 14.3 per cent of the truck loads and 12.7 per cent of the total net tonnage moving over the State highway system. Milk and other dairy products and meat and other packing-house products are the principal commodities in this class, these commodities being the cargo of 66.4 per cent of the trucks hauling products of animals.

Based on net tonnage, products of mines are second in importance to manufactured products. Coal, sand, clay, gravel, and stone are the principal products hauled. The importance of this class of commodities is lessened considerably by the fact that their average length of haul is only 8 miles, and also by the fact that they are carried by only 8.5 per cent of the loaded trucks. Transportation of these products by highway is largely limited to areas containing coal deposits, stone quarries, and sand and gravel pits. In many cases the hauling is of short duration, depending upon the length of time required for the construction of some particular project, such as a bridge, road, or building.

Products of agriculture account for 10.5 per cent of all loaded trucks and 9.2 per cent of the total net tonnage. The chief commodities in this class are fresh fruits and

vegetables, feed and grain and these commodities account for 76.2 per cent of the trucks hauling products of agriculture.

Products of forests are the least important class of goods hauled over the highway.

A large portion of the miscellaneous commodities listed in Table 39 consists of loads of general express and freight, being mixed loads difficult to classify under any specific commodity.

The principal commodities hauled on Ohio State highways are listed in Table 40.

Table 40—Principal commodities hauled on Ohio State highways

Commodity	Loaded trucks	Net tons	Average length of haul
Bread and bakery goods Groceries. Coal. Wooden containers. Milk. Furniture and household goods (used). Empty cans. Clay, gravel, sand and stone Fresh fruits. Other dairy products. Fresh vegetables.	Per cent 6.1 5.4 4.6 4.2 3.9 3.9 3.9 3.9 3.8 3.7 3.0 2.8	Per cent 1.7 6.0 7.6 1.4 5.7 4.0 2.2 9.3 3.5 1.8 2.1	Miles 22 26 7 38 23 117 24 10 33 35 30
Lumber Meat and other packing- house products. General freight. Beverages. Bottles. Feed and other mill pro- ducts. General express.	2.8 2.6 1.9 1.6 1.6	3.6 1.4 3.4 1.8 1.1	19 25 38 23 16 14 66
Miscellaneous Total	100.0	39.0	34

Bread and bakery goods are the principal commodities based on the number of loaded trucks; but these commodities account for only 1.7 per cent of the total net tonnage of all commodities. Groceries, on the other hand, which were hauled by 5.4 per cent of all loaded trucks, made up 6.0 per cent of the total net tonnage. The average net load of 730 pounds of bread and bakery goods, as compared with an average net load of 3,030 pounds of groceries, indicates the use of small, light trucks for the transportation of the former commodity and of larger trucks for the latter.

The movement of milk is important, especially when trucks hauling empty milk cans are included as a part of the general milk movement. The transportation of milk and milk cans accounts for 7.8 per cent of all loaded trucks operating over the State highway system and involves 7.9 per cent of total net tonnage.

Used furniture and household goods are significant be-

Table 41—Types of origin and destination of loaded trucks

Type of origin or destination	Type of origin	Type of destination
Manufacturing plants	Per cent 19.6 18.0 17.3 12.7 8.3 7.1 6.7 5.5 2.5	Per cent 13.2 9.3 30.5 10.3 14.4 4.1 0.5 3.8 3.5 10.4
Total	100.0	100.0

cause they are hauled an average of 127 miles, with individual hauls frequently as high as 200 to 300 miles. These articles constitute 4.0 per cent of all motor truck net tonnage.

Manufacturing plants are the principal type of origin, and retail establishments the principal type of destination of the loaded trucks, as shown in Table 41.

Over half of all loaded trucks originate at or are destined to manufacturing plants and wholesale and retail establishments.

Farms are the source of 12.7 per cent and the destination of 10.3 per cent of loaded motor trucks, and original sources of supply, which include mines, pits, quarries, gas and oil wells, and forests, are the source of 6.7 per cent of all loaded trucks.

APPENDIX II

COMPARISON OF MOTOR TRUCK AND RAILROAD NET TONNAGE BE-TWEEN COLUMBUS AND SELECTED OHIO CITIES

In order to determine what proportion of the total tonnage of commodities moving between cities is hauled by motor truck, and also to develop the factors influencing the choice of motor truck or railroad, an analysis was made of the net tonnage hauled between Columbus and 34 Ohio cities by motor truck and rail lines.

The cities selected are located from 7 to 134 highway miles from Columbus and were chosen to permit an analysis of the effect of length of haul upon the proportions of tonnage transferred by motor truck and railroad, respectively. Hillsboro and Johnstown, both having indirect rail connections with Columbus, were selected to determine the effect of indirect rail connections upon motor truck transportation. Commercial Point, Dublin, Reynoldsburg and Rome were selected to ascertain the amount of tonnage hauled by truck between points having no railroad facilities.

Motor truck net tonnage and railroad carload and less-than-carload tonnage data for an average month of 1925 were taken as the basis for this comparison, as shown in Figure 35, the size of the circles for each city indicating the total net tonnage transported.

It is apparent that distance is an important factor in the amount of tonnage hauled by motor truck. Between Columbus and Akron, Cincinnati, and Toledo, distances of over 100 miles, a very small part of the total tonnage is hauled by truck, while between Columbus and Grove City and between Columbus and Alton, distances of 8 and 9 miles, respectively, almost all of the tonnage is transported by motor truck.

Table 42 presents a summary of the relation between motor truck and rail tonnage according to length of haul.

Table 42—Proportion of motor truck and railroad net tonnage according to length of haul for average month, 1925¹

Length of haul (highway miles)	Mo tru		Ra C.		Ra L.C		Tot	tal
Less than 20 20–39 40–59 60–99	Tons 6,091 5,973 2,299 980 157	$\frac{32.0}{24.2}$	4,803 4,484 2,409	44.0 62.4 59.4	404	1.3 5.6 16.4	10,921 7,187 4,052	100.0

¹Based upon tonnage between Columbus and 30 cities having rail onnections.

Although other factors besides length of haul influence the proportions of total tonnage hauled by motor truck and rail lines, respectively, and although the number of cities in each zone of haul (Table 42) is not large, there is clearly indicated the tendency for the proportion of motor truck tonnage to decreases with increase in distance. For hauls of less than 20 miles, 84.5 per cent of the total tonnage is transported by motor truck; between 20 and 39 miles, motor truck tonnage is 54.7 per cent of total tonnage; and for the longer hauls, motor truck tonnage is 32.0, 24.2, and 2.3 per cent, respectively. As the percentage of motor truck tonnage decreases with increase in distance both rail C. L. and L. C. L. tonnage increase. No appreciable amount of L. C. L. tonnage is noted under 40 miles. Between 40 and 59 miles the L. C. L. tonnage is 5.6 per cent of the total and this percentage increases to 20.3 for distances of 100 miles or more.

Among other factors controlling the proportion of total tonnage hauled by truck are the type of commodities and rail facilities. An illustration of the former is indicated in the movement between Columbus and Johnstown. Although Johnstown is only 22 miles from Columbus by highway and 41 miles by railroad, 73.1 per cent of the tonnage is hauled by rail, practically all of which moves in carload lots. This high percentage of rail tonnage, considering the comparatively short highway mileage and the longer rail connection, is due to the type of commodity transported, 95.7 per cent of the total tonnage being gravel, sand and stone. These commodities cannot be economically hauled by motor truck for this distance, as is indicated by the fact that the average length of haul for trucks hauling gravel, sand and stone in Ohio is only to miles.

The influence of indirect rail connection upon the proportion of motor truck and rail tonnage is shown between Columbus and Hillsboro, a distance of 65 miles by highway and 97 miles by railroad. Between these points 47.5 per cent of the total tonnage is carried by motor truck. Reference to Table 42 shows that, under normal conditions, between 40 and 59 miles, only 32.0 per cent of the total tonnage is carried by motor truck, and that between 60 and 99 miles the corresponding figure is 24.2 per cent. It is evident that the relatively high percentage of motor truck tonnage between Columbus and Hillsboro is due, in large part at least, to the fact that the distance by highway is 32 miles shorter than the distance by railroad.

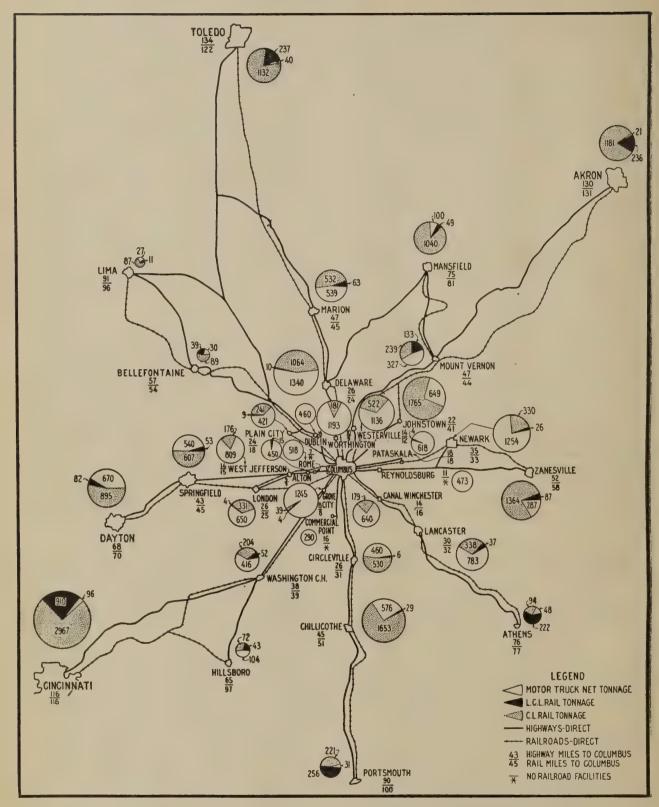
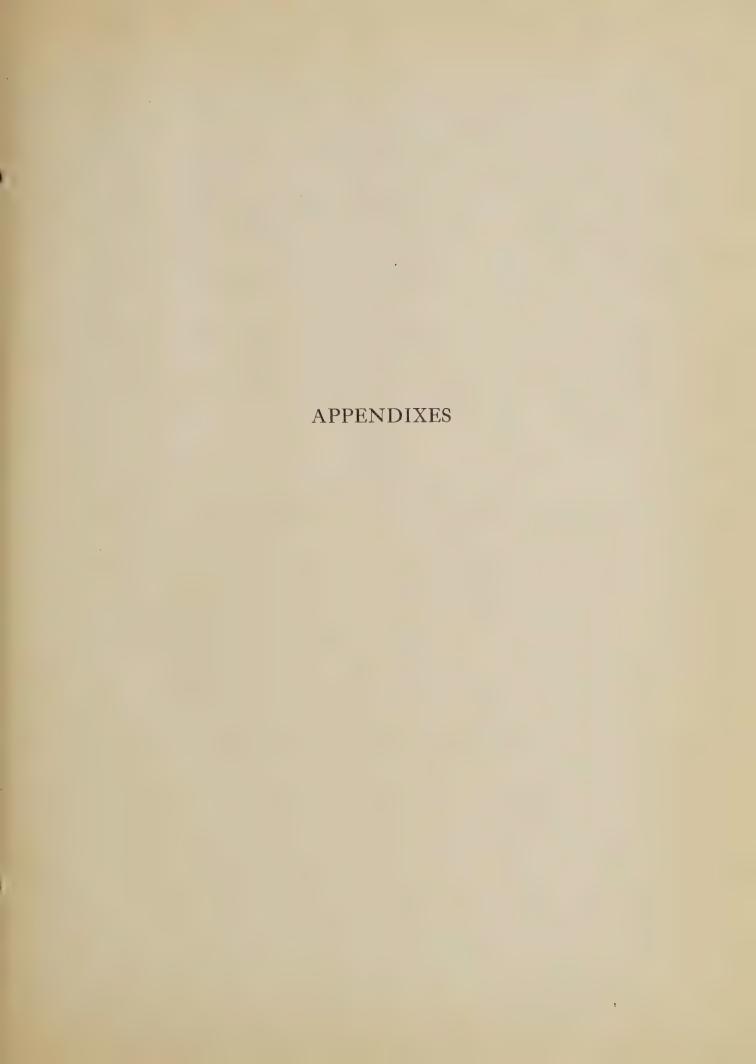


Fig. 35—Comparison of Motor Truck and Railroad Net Tonnage Between Columbus and Selected Ohio Cities



APPENDIX III

MOTOR VEHICLE TRAFFIC AT OHIO TRAFFIC SURVEY STATIONS

(Average Daily, 1925; Normal Maximum, 1925; and Average Daily, 1930)

	Average daily traffic— 1930,	total vehicles	211	124 66 2,821	2,821 3,214 560	2,977 130 154	1,399 1,576 2,448	2,448	35 494 540	502 1,105	24 38	258 278 614	481 340	972	468 358 191	1,052	4,532	131 586	378	434	1,705	150
	Maxi- mum	daily total vehicles	317	180 99 4,244	4,244 4,835 842	4,478	2,104 2,371 3,682	3,682	743	1,677	36	385 414 966	536	1,530	730 564 301	2,079	7,135	207	637	683	1,113	237
Traffic in 1925	ly	Total vehicles	148	81 43 1,845	1,845 2,102 366	1,947 85 101	915 1,031 1,601	1,601	323	328	16 25	169 182 416	233	573	2250 245 131	3,102	3,102	401	277	297	484 1,167	1,292
Traffic	Average daily	Passen- ger cars	126 100	71 41 1,743	1,743 1,964 347	1,829 73 89	851 936 1.526	1,526	23	309	3/3 15 25	163 175 386	270	603	285 221 112		2,720	378	323 230 231	267	420 420 1,110	89
	A	Trucks	12	102 102	102 138 19	118 12 12	95	20.00	26	10.48	* * *	34	18	51	24 19	62 62 382	382	23.2	30 28 28	30	572	14
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	County		Allen									Ashland	,									
Average	daily traffic— 1930,	vehicles	163	75 139 145	40 58 41	44 448 424	122 211 17	30	233	54	50 50 67	155 20 62	204	84 84 60	313 242	242 242 1,846	1,846	2,440	650	266	1,401	150
	Maxi-	daily total vehicles	264	122 225 235	94 67	727	198 343 28	668	377	87	108	251 32 101	331	136	203 389			3,671		400	2,107 2,121 143	225
Traffic in 1925	lly	Total vehicles	115	53 98 102	28 41 29	31 316 299	86 149 12	30	319	33 88	35	100 44 44	46 144 120	59	221 171	1,11	1,207	1,132	448	174	916 922 62	86
Traffic	Average daily	Passen- ger cars	87	99	24 37 28	27 269 244	126	29 21 21	130	388	34	106 10 34 34	38 134	22.034.0	198 149 149	1,082	1,082	1,065	422	156	862 870 47	84
	¥	Trucks	28	246	44-	47 55	23		345				10	- 9 = 0	23 22 23	. 125	125	134	26	18	52 42 52 52	. 14
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	Station		359	360	361	362	363	8	364	365	366	367	368	157	0	369	370		371		372	
	County		Adams													Allen						

*Less than one vehicle per day. Direction of route from station. 2 Numbered routes are State highways, Other routes are: C. R.—County roads, T. R.—Town Roads, † City Street in Lima.

	2,688		55	487	1,470	1,197	1,434	170	386	241	189	104	169 430	234	64	328 349	559	410	1,905	676	652	907	70	847	34 50	37	33	533	48 48	58	121	10	85	399 333	44 85	772	745
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2,316		309	33	280	886	629	832	8 2 2	211	145	980	007	266	155	31	187	337	218	1,155	425 952	409	557	2 4 5	537	31	32	19 41	29	34	37	39		49	262	20	36	424
183 183 98	986	26 26 26	4.4	449	126	195	155	30	55	21	40	C# .	30	19	13	39	30	49	156	105	40	**	* * `	46	C1 4t	99	40	100 =	4*	₩*	17	* (7 == ;	19	11	110	101
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	2,133				292	3,334		1,190	539	278	611	554	588 968	1,379	1,110	268	904	847	247	284	591		2,652	571	364 616	258	598	253	121	473		3,133	832		3,460 2,870	965	232
	3,358				•	5,182	•	1,849	837	432	950	860	913	1,433		416	1,405	1,316	384	442	918		4,122	108 888	566 957	400	929	393	345 189	34		4,820			5,324		357
	1,460			702	197	2,253		804	364	188	413	374	397	623	750	181	611	572	167	192	399		1,792	386	246 416	174	404	171	150 82	320		2,117	562		2,338	652	157
	1,382			664	157	2,099		664	278	157	371	336	361	564	589	143	475	461	146	157	361	96	1,567	325	389	161	350	129	129	11 282	282	1,969	508		2,153	576	150
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		total total vehicles	559 1,858 2,153	1,177				143	407	1,152	204	58 543 653	398	313	163	423	350	297	720 853 1,378	1,378	1,622	1,241	2,560	2,178 6,026 7,164	501
Traffic in 1925	ly	Total vehicles	243 808 886	517	2,421	1,353	101	63	177	600	16	25 236 284	173	136	71 59	184	152	129	313 371 599	599 705	705	291 150	1,113	2,620	218
Traffic	Average daily	Passen- ger cars	189 735 862	862 439 439	2,202	1,251	139	25.82	164	550	14	25 207 261	154	136	52	171 268	212	107	261 325 541	541	501	252	942	2,318	184
	A	Trucks	54 73	4.8.2	219	102	20 20 14	0001	13 * 4	50	- 00 CT	29 *	119	2 * 6	2.7.0	113	30	22 33	5,462	528	\$2 44 44	39	171	302	34
	Route No.2		CR CR 214	214	U.S. 40	U.S. 40	147	265 CR 148	148 53 CR	0.5.50 U.S. 50	CR S3	~~~ ~~~ ~~~~ ~~~~~~~~~~~~~~~~~~~~~~~~	555	U.S. 52 U.S. 52	U.S. 52	53.22	3333	74. TR	125 125 74	125	125	ZSE	122	4 2 4	U.S. 25 U.S. 25
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	County		Belmont						Brown													Butler			
	Average daily traffic—	total vehicles	27 91 111	122 712 722	5.4	45	30	707	20 153	193 27 13		675	77	1,176	1,616	1,360	1,536	1,064	710 17 127	138	949	2,195	3,721	3,317	1,381
	Maxi- mum	daily total vehicles	44 147 179	198	110	117	48 16	32 1,145 1,228	106 113 248	513 244 121	4,121	1,084	123	1,888	2,594	2,040 1,040	2,305	1,380	1,065 25 191	207			5,582	5,362 4,977 4,977	2,072
in 1925	lly	Total vehicles	19 64 78	502	38	32	21 21	14 498 534	46 49 108	130	1,810	476	54	829 1,139	1,139	182	1,002	600 694	404 11 83	384			-	2,164	
Traffic in 192	verage daily	Passen- ger cars	18 55 70	76 446 446	36	39	17	14 458 502	82 040 83	119	1,662	411	45	1,065	1,065	150 150 810	421 950	540 562	375 11 68	340				1,824	•
	A	Trucks	408	10 56	22.2	127	40	40 32	25.	17	148	65	40	67 74	74 29	32	2 X X +	132	00 15 15 15	15	115	100 644	253	340 340	1. 50.00
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140	3258	1,196	32	589 573 267	260 177 182	262 294 124	267 55 467		3,416		865 820 1,628	1,628	342	3,882	513 426 522	110	3,188	48 48 1.509	1,824	168 356	329 232 304 172	124
61 27	125	181 520	338 14 25	256 249 116	1113	114	116 24 203	293 44 758	1,471	51	380 360 715	715 470 387	36	1,688	104 185 227	278	1,445	21 21 656	793	29 73 155	143 101 132 75	54
57	121	175	286 144 244	191 184 114	75	98 1110 50	106 20 184	269 38 676	1,380	63	345 328 652	436 359	133	1,516	193 167 167 209	44 44 44	1,381	19 46 589	720	20 61 142	132 91 121 70	40
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488	320 196 343		3,045 4,869 4,878	152	672 954	564 3.2 60 83	85 575	189	182 761 784			2,324		1,695	191 191 299 292	336 202 497	428 124 138 02	154	21 9 1,079		1,653 2,225 1,102 1,162	115
212	139 85 140	1,189	1,324 2,117 2,121	347	292	245 14 26 36	37	782	331 341	931	2,509 2,509 2,480		35 20 720	737	83 37 130 127	146 88 216	186 54 60 40	12	474	87 413 717	726 977 479 63	308
164	118 76 126	1,092	1,154 1,902 1,909	318	381	206 12 9	21 222	72	302 307 307	862	2,333		31 18	668	31 120 103	142 70 182	160 44 48	\$5 12 12	425	9376 656	644 878 430 57	280
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	Average daily traffic—	otal hicles	700	133 195	310	518 564 239	239	864 864	929 929 50	126 108 268	252 252	339 102	71 51 247	438 658	265 129 371	229	228 455 554	223	318 173 181	24 14 26	13	108 363	802 70	45	.50 .50 .67
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	Maxi-	total daily vehicles		317	504	915 389	2,134	1,389	1,494 1,494 80	203 173 435 357	534 407 575	550 166	115 83 400	2,332	2,224	1,994	738	343	515 281 306	39 23 41	161	589	490	2,190	1,847
Traffic in 1925	lly	Total vehicles	494	138	219	398	919	610	656 35	76 189 155	232	239	50 36 174	1,014	91	175	321	157	122	101118	60/	256	213	962	811 682
Traffic	Average daily	Passen- ger cars	450	78 124 97	184	358	798	538	612 34 34	174 174	220 163 217	207	34 151	1,014	888	166	306	135	103	20 81 81	00 00	239	200	871	753
	A	Trucks	36	16	35	63	121	72	4	15	3222	32	222	155	95	200	25.4	13	9100	Y=# :	-25	177	133	91	4 288
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	County		Clermont			,				Clinton												•			
-	Average daily traffic— 1930,	rotal vehicles	324	691 560 560	233 178 216	281 643 507		3,445 3,432 3,544	3,544 1,296 1,160	154	344 241	183 44 44	176 181 41	481	429 466 140	362	477	354	153 149 208	239 193 93	670	773	467	127	45 125
	Maxi- mum	dany total vehicles	485	1,035	350 267 324	421 964 895	102	5,211 5,192 5,361	5,361 1,960 1,755	232 237 845	845 559 391	717	285	782	757	589	775	575	248 242 338	389	1,088	1,256	759	207	202
in 1925	ly	Total vehicles	1	450 450 365						100															
Traffic in 1925	Average daily	Passen- ger cars	189	340	120	378 378 352	39	2,105 2,099 2,213	2,213 785 703	334	203	26	98	308	305	238	260 260 216	216	95 94 124	150 128 58	384	470	260	284	32 70 20
	Av	Trucks	22 49	22.00	218	374	27.00	137	53.50	 9999	150	C 10 00	32 6	32	24 5	00 * £	347	34	23		686	200	22-	120 ()	- 80
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527 505 1,384	368	1,125 1,125 1,132	111 64 1,781	1,478 1,478 137	262 285 65 240	211 359 698 722	271 148 1,154	423 682 441	441 212 332	589 349 1,289	1,010 1,000 1,765 2,363	1,484	1,484 89 965	1,213 1,234	185 194	39 8,100	2,521	638	1,198 . 767 . 661	855 1,656 1,656	2,662	7117
849 813 2,229		1,778	175	2,337 124 216	414 451 104 380	334 568 1,104 1,141	428 235 1,824 2,199	1,079	697 336 524	933 552 2,038	1,590 1,564 2,762 3,698		1,510	1,899	289 303		3,615	897	1,718	1,226 2,375 2,375	3,817	1,029
373 357 979 979	353	420 126 773 778	74 44 1,224	1,016 1,016 54 94	180 196 45 165	145 247 480 496	186 102 793 956	291 469 303	303 146 228	405 240 886	094 227 687 1,213	1,020	0200	834 848	127		1,557	394	740 474 408	528 1,023 1,023	1,644	443
344 329 921 921	223	362 117 733 735	1,105	580 952 44 68	154 166 30 129	126 211 428 461	161 64 704 836	249 417 269	269 141 218	381 221 831	046 203 633 1,141	954	954 55 616	7777	113	4,559	1,404	336	381 377	481 898 898	1,500	397
22.0	300	00 4 0 4 13 4 13 4	119	26 10 26	30 30 36 36	35 35 35 35	38 38 20 20 20 20	345 342	34	19 55	24 48 72 44 70 70	999	47	24.50	-4-1	444	153	8 8 8		125 125 125		
95	262 CR	U 70 44 44	## ## ## ## ## ## ## ## ## ## ## ## ##	CR4 88	TR	88 4 4	 \$KK5	8 8 8 8 8	CR TR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	CR 61 U.S. 30	& 61 62	CR S.s.	0 4 4 E	62 62 62	1.8.20 U.S. 20	U.S. 42 U.S. 42	94	CR CR	CR 43 43	0.S.422 87 11 \$ 422	91
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533 140 140	651	1,301	298 266 118	159 65 146	162 243 112 1,032	1,341 829 867	516 429 40	791	597 385 194	294 294 76	1,589 1,558 1,586			826 826 926	298 298 42	252 165	1,321	1,308	1,017	86 72 146	1,589	110
706 856 218	1,019	2,036	467 416 184	124 248 101 228	253 380 175 1,614	2,098 1,297 1,357	126 807 672 62	1,237	934 602 304	506 506 118	2,461 2,414 2,457 2,457	3,393	1.872	1,280	485	409 269 244	2,148	2,128	1,054 253 221	117 237	2,559	178
310 376 95 65	4443	885 463 617	203	108 44 99	110 165 76 702	912 912 564 590	351 292 27	538 538 102	406 262 132	220 220 52	1,081 1,060 1,079	1,490	822 449	\$62 562 562	2111	178	117	925	110	51	1,124	17111
291 354 84 57	396	789 401 551	162 141 67	36 98 90 90	92 143 69 623	828 527 547	298 249 26	481 481 95	336 219 101	200 200 4 48	985 965 947	1,373	749 421 123	518	158	138	110	876	91 80 80	50 45 86	1,032	1,032
110 222 111 8	47	96	41 13		18 22 7 79	37 84 43	53 1	527	70 43 31	20 20 4	96 95 132 132	117	733	0447	0 to 00	113	49	88	10	110	92	2 20
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	Average daily traffic—	total vehicles	997	1,345 1,357	3,006	*, 797 504 504	48 47 370	850 612	1,145 1,685 928	928	551 904	904 1,172 1,173	24	1,032	618 469	299	648 645	414 372 613	389 515 932	20	121	1,363	355	333 40	108 95	237	387
	Maxi-	co	1,417	1,194	4,118	715	78 76 900	1,380	2,735	1,506	1,453	1,453	742	1,658	754	480	1,051	603	630 835 1.511	32	196	2,188	569 84	535	173	380	1,022 14 34
Traffic in 1925	ly ly	Total	616	\$31 831 838	1,857	311	34 33 261	432	1,189	389	389 638	827 827 822	326	1,048	436	211	457	262	274 363 657	14	20 00 0	961 409	250	235	76	11 167 440	273 6 15
Traffic	Average daily	Passen- ger cars	553	450 735 775	1,774	245	32 27 231	549	1,103	570 326	326	775	305	978	404	195	436 787	243	243 328 621	14 46	720	851 360	222	209	56	11 152 400	248
	A	Trucks		969	_	4													3031		21						2 * 2
	Route No.2		CR	CR 254 254	CR 224	822	TR S1	51	51 & 9	6 89	20 20 20 20	200	TR 11.	29 121	200	521	CR 240 240 240 240	108 &249 CR	7 2 2 7 2 2 7 2 2	25.	249	90 00	∞ ∞ €	***	000 000 000 000 000 000 000 000 000 00	13.11	TR TR
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	Station		547		549	550	551	552	553	554	29	30	31	201	000	202	S S	556	1	155	32		203	204	707	205	206
	County		Cuyahoga			+	Darke			,						Defignoe											
<	Average daily traffic— 1930,		1,140	2,017 1,099 1,073	37	8,220	1,073		1,724					2,181	36	256	896	2,403			3,855	840	567	3.066			2,341
	Maxi- mum	total total vehicles	1,635	1,577	30 23 869	869	1,525	308 212 2,160	2,450 9,950 4,816	7,440	6,035	2,551	2.303 541 3.098		51	363	4,115	6,327 3,413 3,413	2,001	1777	5,476	1,194	805	4,356	1,042	389	2,973
Traffic in 1925	ily	Total vehicles	704	1,240	23 23 378	5,077		134 92 939	1,065	3,235	2,624	1,109	1,347	1,347	22	158	1,789	1,484	588	77	2,381	422 519 872	350	1,894	453	169	1,440
Traffic	Average daily	Passen- ger cars	1,062	1,033 621 608	332	332 4,712 4,712	225	121 82 757	3,963	2,913	2,328	1,021	214		107		20 00	2,013 1,403	P.		2,149	364	325	1,721	403	154	1,223
	A	Trucks	128	55.55	4,	36	000		33 33	32	73	12 8 0							127 52 60	31	232 132	\$ 4 8 8 8 8	25 25	173	50	33	100
	Route No.2		91 U.S.322	91	4KR	U.S. 20	22.20	555	U.S.322 U.S.322	S S S S	U.S.422 U.S.422	TR TR	£4 £4 £3	91	188 188	TR 14	400	U.S. 21	A K K K	TR U.S. 21	U.S. 21 TR	2 50	CR U.S. 42	U.S. 42 TR	25	82 282 20 20	888 888
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	Station		28	200	531	532	533	534		535		536	537	538		539	540	541	542	543	7	244	545		546	547	
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261 280 30	50 252	144 542 434	438	391 1,106	216 1.939	1,939	483 348 348	391 378	388	905 679 1,066	347 216	197	1,726	1,007 833 556	556 364	364 999	999 608	1,142 884 923	568 308	242 142	612	204 187	200	229 225 185	144 215	164 193 709	288 28 28
416 446 48	405 402	230 865 692	304	1,764		3,063	763 549 540	605	803 621	1,086	180 554 345	315	2,760	1,010	890 582	582	1,583	843 1,808 1,400 462	899	383	994	331	324	366	235	313	161 161 51 46
181	35	376	132	767		1,345	241 241	272 263	349	472 741	241 150	137	1,200	579	387	253	695	5/1 794 615 642	395	168	432	132	141	159	102	116	422 70 22 20
143	27	316	113	214	1.256	1,256	206	206	319 247	368	226 131	414	1,125	530 371	321	227	387	538 725 585 611	365	157	404	124	113	134	138	108 116 457	200
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1,094	34 551	3,176	133	543	267	766	5.023 4,984 331	122	2,820 2,903	124	3,105	1,610	1,976	209	198	150	1,803	3,151	123	437 833 1 343	2,663	2,555	1,272	4448 448	356	373	246 398 2,282
480	15 15 242	1,381	*	236	116	333	2,184	53	1,226	54	1,350	700	859	91	339	287	784	536	•	192	1,110	1,111	553	195	155	162	107
438	13 207	1,288	176	224	106		2,066	141	1,163	93	1,209	170	756	87	299	263	723	491 1,314 1,327	49 27 180	287	360	960	494	172	136	141	885 152 934
31 29	35	93	128	177	22	25	130	13	82	0 41	141 128	30	103	4 4 v	40	24	70	45 70 75	2 4 1.	19 75	149	151	500+	23	21	21 21 10	22 21 28 28 28
188 TR	TR 193	193	203 203	47 CR	CR.	32	U.S. 23 U.S. 23 TR	CR	£ 8 5		 	TR U.S. 42	U.S. 42	TR U.S. 42	U.S. 42	47 TR	U.S. 42	U.S. 23	CR CR 47	CR 12	101	# # # # # #	4 4 D	ARE.	:2 2 2 3 3 3 3	X & & & & & & & & & & & & & & & & & & &	0.2 GR
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	Average daily traffic—1930,	total vehicles	295	304 137 1,946		5,129 323 199 269	160 424 183	1,130 1,130 1,102		1,896 2,357 320 130	2,747 3,191	1,034 882 380	291 638 638	481 75	396 363	105 104 104	492 492 492	055 1,836 1,531	1,000	1,000	327 161 130	93	377
		daily total vehicles	439	2,898	265 7,639	, 524 322 437	260 688 297 182	1,070 1,833 1,787		3,075 3,823 520 212	4,455	1,431	1,035	780	583	168		2,949	1,624	1,624	262	152	100
Traffic in 1925	ily	Total vehicles	189	1,248			113 299 129 70			1,53/ 1,662 226 92	1,937 2,250	622 622 268	450 450 450	339	279	47.	347	462 1,295 1,080	49	285	114	132	94
Traffic	Average daily	Passen- ger cars	161 213	1,154	3,046	2,040 211 132 186	107 278 114	436 720 716	707	1,598	1,868 2,178	576 246	398	284 49 49	250	64	314	1,211 1,012	45	235	73	120	40
	A	Trucks	28	16 16 16	244 244 244	177	21 15 15	29 77 61	48 30 30	24 4 5 1 5 1	28 72 72	44 72 73 73	55 55 F	25.40	29	2000	333	84 84 68	86	80.8	966	27°	9 9
-	Route No.2		104	CR CR	CR U.S. 40	0.5. ±0 64 0.8. 20	U.S. 20 65 65 CR	888B	U.S. 20 C.R. 20	2522 222	CR 2228	3885	3333	33 TR	U.S. 20 U.S. 20	05. 20 U.S. 20	999	90 2	S,-,:	,001	S S S S	<u> </u>	233
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×	Average daily traffic— 1930,		507	537 108	521 171 204	133	10 24 617 660	101	639 412 704	1,093	210 684 599 518	504 483 519	2,126 1,609 949	935 639 1.271		2,262 1,643 2.005	1,640	2,822	148	3,405	2,627	6,830	295
	Maxi- mum	danly total vehicles	823 182 904	872 872 175	846 278 331	115 216 152	1,003 1,003 1,072	159	1,027	2,227	1,010 1,010 883 764	743	3,137 2,374 1,401	1,380	4,382	3,337 2,424 2,958	2,443	980	4,688	5,071	3,913	10,173	439
n 1925	ily	Total vehicles	358	315 379 76	378 121 144	50 94 96 20	436 4466	. 71	451 291 497	978	148 439 384	323 310 333	1,364	600 410 815	1,905 1,750 256	1,451 1,054 1,286	1,052	1,810	2,019	2,184		4,381	189
Traffic in 1925	Average daily	Passen- ger cars	342 74 367	300 342 58	323 104 133	84 63 49	15 406 442	24 24 24 24 24 24	424 268 458	714 928 1,064	328 257 272	264 286 302	1,247	534 367 718	1,771	1,318	980 1,034	1,681	1,081	2,047	1,567	4,088	161
	A	Trucks	16 5	312	17	101	30 24	*	27 23 39	8000	1111	324	117 58 58	66 43 97	134 126 24	133 130 146	72 89 22	129	172	137	118	293	28
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23 554 748	,067 1110	110	121	535	192 192	324	353 294	253 78	92 92 102	151	167 48 23	7769	769	978	205	060	33	144	159	204	805 498	603	471	404 541	42	624	404	6969 696	519	359	215	500	138
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381.	734	76	83	368	132 132	223 243	243	174	63 70	104	33	1,906	1,906	673	829	750	42 23	90	109	140	553 342	2,476	1,698	965	1 135	1,116	278	1,853	1,731	247	148 344	341	766 1,746
344	652	10	63	325	96	187	183	50	57 62	588	31.	1,753	1,753	623	755	669	32	93	107	136		2,238		871 336	29	1.039	243	1,544	1,611	234	140	271	647
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140	347	1,444	596	1,661	1,305	1,847	37.5	067	934 897	1,580	1,198	204	3,482	492 384	3,848	152	4,510	198	4,662	191	522	437	1,044	32 30	278	763	. 118	184	1.120	139	1,143	359	600 600 600 600
53	151	628 437	259	722	563	811	163	39	406 390	183	541	128	1,514	214	1,0/3	300	1,961	42 86	2,027	83	227	136	454 328	13	121	3333	522	81	124	605	502	156	261 261 300
51 49	131	390	223	296	339	719	127	35	354	. 166	484 303	92	1,385	194	1,503	58	1,833	32	1,867	69	181	156	398	11	101	302	488	61	95	521	434	144	227
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		Average daily traffic—1930,	total			-	700 653 237 156	1,		3,599 3,580 64	60 460	436 267 208	1,785	2,086 2,086 2,068	36 150 94	1.024 945 37	1,472	1,294	271	103	423	298 428 450	165 165 192	1,151	515 1,521 1,881
		Maxi- mum daily	total	586	182 281 1.776	1,854	1,127 1,051 382 251	154 264 2,052	2,249	5,796 9,766 104	741	430	2,875	3,327	239	1,633	2,348	2,063	2,150	168	688	697	269	2,574	2,475 3,059
nued	Traffic in 1925	ily	Total vehicles	255	122	806 44 52 52	457 166 109	67 115 892	978 116 116	2,520	322	303 187 146	109	1,448	105	662	1,031	906	192	73	299	303	117	1,019	1,076
-Continued	Traffic	Average daily	Passen- ger cars	223	63 110 710	740	444 410 152 97	53 99 856	930	2,366	287	708 161 129	1,088	1,358	95	002 014 23	965 976 843	843 836	174	30 80	288	286 286 294	107	728	1,028
O NS-		A	Trucks	32	112	99	44 17 12 12	14 16 36	16 16 16	151	333	26	162	103	10 2	25 48 3	900	111	18	, * ·	* 11	17	0100	134	638
STATIONS		Route No.2		CR	103 103 31	E XX:	31.	55.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2	17	U.S. 25 U.S. 25 TR	TR 187	100 100 100 100	CR 212	U.S. 25 U.S. 25	ZEE,	15 & 17 15 & 17 TR	355	31	2 65 65	2 × × ×	U.S. 30	31.30		₩ ₩ W	U.S. 30
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TRAFFIC		County		Hancock													*		Hardin				,		
ОНІО	<	Average daily traffic—1930,	vehicles	794 684	152 694 346	1,869	1,805 1,805 1,026	3,515	2,930 7,013 1,355	1,533 902 910 135	82 82 116	26 469 636	306	1,472	1,257	1,100	2,294 1,891 1.891	4,127		4,131	1,704	3,519	935	171	2,052
AT		Maxi- mum daily	total vehicles	1,247		n n	2,834 1,433 1,610	n n	4,600 11,010 2,128	1,41.7	182	736	481 1,026 2,530	2,312 607	1,973	1,744	3,636 2,998 2,998	6,541			2,700			281	3,305
TRAFFIC	n 1925	ily	Total	542	104 474 236	1,276	1,232	2,399	2,000 4,787 927	1,048 616 621 92	7002	320 320 434	209 209 446 1.100	1,005	858 466	751	1,566	- 20		2,810	1,163	2,402		121	1,437
	Traffic in 1925	Average daily	Passen- ger cars	502	404 404 190	380 1,038 201 1 103	996 490 513		1,942 4,048 697	524 512 80	65 65 44 65	272	181 400 944	874 220 504	403	635	1,345	2,472		2,578	1,013	2,030	544	103	1,358
HICLE		A	Trucks				236 133 187			109 109 17			28 28 46 156	131	989		221 84 84	.,		242	150	372	104	17	153
R VEHI		Route No.2		m m	STS:	TR TR 3	126 U.S. 50	& 126 74	74 & 125 U.S. 27	TR TR TR	CR 264 264	TR 128 178	CR CR U.S. 50	U.S. 50 TR	U.S. 52	CR' 74	74 U.S. 50 U.S. 50	W.S. 25 &U.S. 42	& U.S.42	264	U.S. 52 U.S. 52	00	U.S. 27 U.S. 27	485 5	U.S. 25 U.S. 25
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10	144 400	426	349	100 401 811	955 944	20 79	159 321	1,042	17 9 282	197 610 686	31	638 574	147 139 27	972	109	86 261	238 360 243	224 251 251	286	242 237 686	563 121 373	370	51 403	311	259	244 265	172	1,602 1,602 1,677
16 80	184 649	690 453	1,097	152	1,532	32	515	1,671	14 458	320 989 1,113	51	1,035	239	1140	177	140	586	363	888	384 1,113	913	009	83	504 248	290 421	396 430	104	2,599 1,454 2,721
35	282	300	246	66	673	14	226	734	199	139 430 484	22	450	98	927	77.00	184	254	158	202	167	397	261	36	219	183	172	121 45	117 1,130 632 1,183
32	75	278	215 429	50	627	13	203	667	12 5 184	130 406 453	8 2 3	382	888	9 2 2	4.0	172	227	140 155	368	102 155 444	365	225	32 263	205	117	158	37	1111 1,041 582 1,079
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584	1,143	120	439	1.523	1.066	1,027	419	2,008	589	499 573 2,006	2,155	262	954	961	455	515	99	46	569	1,343	385 205 373	393	582	428	1,030	1,024	448 343	205 143 315 366
254	497	18	191	659	207	451	184	759	256	217 249 872	751	114	415	438	198	184 224	43	20	250 824	590	169 89 162	171	253	183	448 498 138	95	195	89 62 137 159
239	39	12	179	619	188	430 430 626	167	821 682 582	218	239	718	106	361	384	154	214	39	20	230	519	148 81 152	168	211 286	158	460 460 120	85 404 373	175	86 54 117 139
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CR 67	69	67	67	TR 31	31 31	283	CR U.S. 30	U.S. 30	151 CR	000	. X. &	U.S. 22	U.S. 22 & 151	U.S. 22 & 151	151	3 3 3	35 CR	S N N	35 & 6	35	55 65 U.S. 24	0.S. 24	655	CR 23	33 CR	33 33	0 0 0	TR CR 115
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672 673	674		675	62	72.0	231	1	929	677	678	629	089			681	682		684	63	233	685		989	687	700	889		639
Hardin								Harrison													Henry							·

MOTOR VEHICLE TRAFFIC AT OHIO TRAFFIC SURVEY STATIONS-Continued

	Average daily traffic—	total vehicles	127	263 500 3,641	3,619	170	195 236 151	3,263	885	379 401	352 496	633 496	1,089 1,089	284 187	225 226	1,342 1,027	1,997	1,997 148 298	321 126	524	206 575 586	2,836	3,025	582	341 350
		daily total vehicles	207	428 814 5,927	5,890	276	317	5,311	138	616	30 573 807	1,030	1,773	304	368	2,163	3,217	239	517	1,006	927	1,241	4,875	945	554 568 568
Traffic in 1925	ily	Total vehicles	219	354 2,577	2,561	120	138 167 107	2,309	60	268	13 249 351	351	771	201	159	950	1,413	105	227	371	140 407 415	2,007	2,141	376	241 241 247
Traffic	Average daily	Passen- ger cars	80	317 2,366	2,365	100	122 122 86	2,132 136 136 85	50 29	232	215 314	394	693 220	181	140	882 679	1,308	188	202	346	368	1,831	1,948	342	216 216 219
	A	Trucks	100	37 211	196	20 40	16 21 21 21	177	* 10	36	34	324	2 20 00 00	20	180	68 48 48	105	12 23	25 10	35 25	39 31	48 176	193	34	28
	Route No.2		885	18 &	18 & 17 S	S. S	18 18 10 11 50	0.5. 20 60 60 60	TR CR 6 & 13	6 & 13 162	7.000 7.000	38;	77 CR	AK K	66 E	6 & 13 6 & 13	TR U.S. 20	18 & 60 60	28 CR	13	17	18 &	18 & U.S. 20	1111	X===
	Direc-		Zona	भे था भ	W	Zor	abze	o⊠≸	m≱z	SOME	≧Zwi	n≱e	4 ĕ Z	e B≥z	N N N	a Zo	≱≅₿	امح	m≽z	ZwE	ı≱z	る田	M	Zor	os≾⊈
	Station		720	721		722	723	. 724	725		726	202	728	729		89	69	242	242	647	244			730	731
	County		Huron			,																		Jackson	
	Average daily traffic— 1930,	total vehicles	303	20 605 605	005 44 1 034	1,004	142	119 155 0	648 650 192	214	1,722	280	1,076	373 517 320	411 -	107	255	315	425 25 440	306	284	319			432
	Maxi- mum	daily total vehicles	492 465 37	972	717	348	280 228 228 80	191 248 9	1,049	347	308	449	1,726	599 823 511	656 83 186	170	143 39 55	501	39	812	453	879 508 508	1,104	644 644 748	55
n 1925	lly	Total vehicles	202	427	31 729	708	123 123 10 0 39	109	456 458 135	151	134	197	758	263 358 222	36	252	17	218	294	353	382	382 221 221	485	283 283 325	306
Traffic in 1925	Average daily	Passen- ger cars	196 178 16	391	30	138	108 95 36	101	402 401 112	128	1,127	162	702	231 305 184	36	55	15	167	254	308 193	174	325 191 191	433	267 267 290	266 19 19
	A	Trucks	248	36	45	15	11.00	× 00 ×	54 23	23	10 86 86	333	26	8 8 8 8 8 8 2	2**	011	001*	521	0 * 54	45	23	388	52	310	40
	Route No.2		138 138	H 88	TR U.S. 50	U.S. 50	124 CR CR	28 78 78	75 75 180	180 TR	31.02	77.7	32.5	180 19	179	179	ినస	76	TR'S	సకిస్ట	39	355	19 & 39 19 & 39	39	4XL
	Direc- tion1						ne≽z																		
	Station		707	65	99	236	237	708	709	710	238	239	240	711	712	713		714	CT	716	717	718	67	241	
٠	County		Highland					Hocking						Holmes										Huron	

217 278 1111	126	116 7 213	156 268 240			2,406		324 783 663	2,350	203 152 319	240 1,231 1,572	857 600 529	4,929	4,869 4,869	415	800		1,507 6,752			248	341 245 212	204 128	295 971		2,096 329	315	136 115 135	119 837 850
352 451 179	113	189 12 345	435			3,866			3,487	225	350 1,826 2,332	1.272 890 784	5,506			1,175	690 2,038	2,213	3,780	1,325	426	398	331	1,576	1,210	3.402	515	221 186 218	1,359 1,380
153	889	150	110	91 722	1,080	1,080	1.698	505 428	1,516	198 198 206	794 1.014	553 387 341	2,394	3,141	268	516	303 895	4,356	1,628	582	185	175	144	208	526 81 1 480	1,479	222	96 81 95	84 591 600
134	447	00 4 138	169	835	1.042	1,042	1,594	453	1,424	183	734	497 329 290	2,068	2,821	182	482	263	3,942	1,523	506	169	216	136	174 570	440	1,355	216	96 76 85	521 534
19	16	10	15 20 33	54 6	388	38	104 20	52 50 50	92 67	19	100	56 58 51	326 190	320	2 % %	34	76	414	105	76	10	28	, w 1	34	86 170	124		0 2 0	70 20
13 & 95 1 R 95	88. 88.	1. L	13	CR 13	133		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	16. 25. 16. 16.	U.S. 20 U.S. 20	50 % i	175	222	U.S. 20 U.S. 20	U.S. 20 U.S. 20	166	+ +	284 84	05. 20 U.S. 20	175	86	141	141	TŘ 217	TR 7	CR II S 52	U.S. 52 141	141 CR	TR TR 217	U.S. 52 U.S. 52 U.S. 52
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747	749	750	751	752	73	250	251	753	727	*C*	755	756		757	758	# !	75	92	252	253	759	160		761	762	763		764	765
Knox				•				Lake									•				awrence								
1,233	*	35.6 150	140	16	160 146	088	461 461 638	638	1,094	2777	1,296	88 485 557	1,993	1,993	757	1,262	1,262	1,4/2	383	248	946	1,367	700	300	135	125	703	762 772 743	146 220 475
2,001 1,840	1,122	978 577 244	228	25	260	1,414	740	1,025	1,654	1,355	1,960	133 734 842	3,013	*	1,145	1,927	1,927	2,248	574	371	6.	2,220	n n	136	• 218 290	202	1,141	1,237 1,254 1,205	237 356 770
63 870 800	4888	425 251 106	99	111	1113	621	325	450 301	301	589	852 114	58 319 366	1,310	1,310	246	830	333	908	252	163	622	965	404	212	95	888	496	538 545 524	103 155 335
55 744 684	107	378 224 95	06 - 1	= 4	105	573	282	417	286 663 866	\$12 152	54 54	287 330	1,101	-	218	745	745 287	646	233	147	570	915	470	176	1/0 83 114	78	430	524 504 504	98 147 314
8 126 116	100	27	o ~*	* 2	oo 4	448	24.43	33	15 56	30	168	14 32 36	209	209	200	0 00 0	85	75	19	16	52	20 34 34	24	32	12	10	610	54 21 20	. 8
CR 75	233	140 139	TR TR	TR	CR	124	124 75	75.5	43.8	LOO.	213	151 U.S. 22 151 &	U.S. 22	152	152 43	151	151 43	U.S. 22	213	152	6 150	n m m	CR	TR 19	<u> </u>	95	7 S S	95 55 55 55 55 55 55 55 55 55 55 55 55 5	205 CR 13 & 95
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	Aver8ge daily traffic— 1930,	total vehicles	2,392	1,636	156	30 30 61	118 106 1111 618	283 622 735 635	10 58 256	249 196 145 520	561 129 64	968 769 1,481 1.479	217	239 89 170	218 146 217	2,139 3,195 5,294	282 4,781 4,532 243	2.596	562 8,102 8,037		1,444 2,765 424
	Maxi- mum	total vehicles	3,887	2,607	253 248 25	448 60 90	172	1,010 1,194	16 94 416	405 317 235 844	911 209 104	1,2/1 1,249 2,379 2,377	348	385 143 273	351 235 327	3,225 4,816 7,979	7,206 6,831	3,912	846 12,211 17,114	9,49	4,168
Traffic in 1925	ly	Total vehicles	1,674	1,150	110	221	75 78 436	200 439 519 448	181	175 138 102 367	396 91 45	543 1,045 1,044	153	169	103	1,402 2,094 3,469	3,133 2,970 159	1,701	368	280 280 942	1,812 278
Traffic	Average daily	Passen- ger cars	1,547	1,048	103	19	58 58 65	188 415 460 380	40	145 106 68 339	349	433 966 965	11 143	158	141	1,285	2,824 2,724 157	1,592	314 5,019 4,991	35 260 768	1.674
	A	Trucks	127	102	~ ∞ 4	1277	233	24 24 59 68	4 - 00	337 337 28 28 28	7 4 ∞ ½	110	10	11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	113	117 130 495	309 246 2	109	54 290 276	20 20 174	138
	Route No.2		13 CR	16	533 233	. SSS	68 17 37	32 XX	1.R 69	CR 32	32 69 69	327 327 337 337	TR CR S	8866	8888	254 254 57	475 475 475 475 475 475 475 475 475 475	C ₂ 2	CR U.S. 20 U.S. 20	SS CR	U.S. 20 CR
	Direction1							m≱Zo													
	Station		81	i	780	781	782	783	784	785	787	82	255	256	788	789	790	791		792	793
	County		Licking		Logan				•						Lorain						
<	Average daily traffic— 1930,	rotal vehicles		907	95 374 744	1.047	1,563	1,705 1,416 756 382	137 503 476	129 476 507	231 87 93	84 1,308 1,722	354 995 995	322 1,512 1,506		226 1,655 1,403	90 1116 84	36 26 77	11,538 1,145	2,565	
	Maxi- mum	tota;	697 P. 003	1,457	153 601 1.195	1,683	2,781	2,744 2,279 1,217 614	221 810 766	207 766 816	373 140 150	2,104 2,772	570 1,601	2,433	3,526 2,914 412	363	145 186 136	58 41 124	2,475 1,842	120 4,168 4,168	
a 1925	ly.	Total vehicles	303	640	264	726 595	1,094	1,193 991 529 267	352	404 90 333 355	162	59 915 1,205	248 696 696	1,058 1,058	306 1,533 1,267	1,158	63 81 59	25 18 54	1,076	1,795	1,053
Traffic in 1925	Average daily	Passen- ger cars	259	563	238 452	644 668 544	1,037	1,139 935 462 234	309	293 293 307	139 52 58 58	46 846 1,110	221 612 612	185 932 928	1,471	1,114	53 53	21 17 49	1,014	1.640 1,640	1,048
	A	Trucks	44	727		52821		33.7.6 33.7.6 33.7.6	643	10 48 48	23	13 69 95	27 84 84	40 126 126	29 62 44 8	444 000 000	0000	4 ~ v	8 62 70	155	105
	Route No.2		TR	U.S. 52 U.S. 52	TR 75	133	U.S. 40 CR CR	U.S. 40 U.S. 40 79	ANA 4	TR CR 47	44 CAR 5	13	19 79 79	CR 16 16	CR U.S. 40 U.S. 40	79 U.S. 40 U.S. 40		S.T. 51	13	CR 16 16 16	113
	Direc-		NE	Zw	MZE	i≽Z∞i	aBZv	wz≼¤	m≽Z¢	SEX											
	Station		765	77	78	166	767	768	692	770	771	772	773	174	775	7		778	977	79	81
	County		Lawrence			Licking															

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3,2		4.01	× 1	1,2			1,95	2,26		25 0	2,88		3,28	3,98	27	350	2,03	25.	48	19	62	1.60	1,60	30	33	2,04	54	0 00 4 4	8	1,84	1,56	2,42	43	1,18	99	1,15	1,06	417 569	1,06	333	4	2,05	1,588		3,126	80	2,37	2,33	2,31
4,755	4,755	376	1,163	1,019	1,168	3,402	2,828	3,286	1,781				1.576		451	2,767		414	782	310	1,014		2,608	483	3 277	3,277	879	-	1,348				610	1,661	927	1,615	1,419	798	1,488	474					4,290		3,330	3,270	3,276
2,048		161	501	439	503	1,205	1,218	1,415	767	1 707	1,799	2,053	685	2,810	196	1,203	1.435	180	340	135	441	1.134	1,134	212	236	1,439	386	592	592	1,124	952	739	265	722	403	702	648	347	647	206	29	1,255	968	908	1,905	490	1,448	1,422	1,411
1,803	1,803	134	427	385	437	1,239	1,053	1,177	637	181	1,571	1,869	1,809	2,681	166	1,149	1,370	2/2	225	100	282	1.082	1,082	187	206	1,389	362	543	543	865	826	1,2/9	210	644	350	612	602	303	569	178	25	1,105	858	830	1,688	448	1,273	1,252	1.306
245	245	28	74	54	99	166	165	238	130	227	228	184	46	129	30	54	65	7 6	115.	35	159	52	52	25	30	50	24	47	49	165	126	122	10, 1	780	53	66	46	44	78	28	4	150	110	78	217	42	175	170	105
U.S.127	U.S.127	7.E	7	183	183	٦ ٢	263	263	U.S. 20	40	2 & 64	177	142	U.S. 40	56	s.	oj o	U.S. 42	56	CR	20	S,	U.S. 40	38	8 S	U.S. 40	56	380	38	- 1-	164	CR CR	CR	S S S	S S S	17	17	45	17	CR.	CR	4 4	46	46	0 00	45	000	CR	CR U.S.422
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Lucas													Madison																	Manoning																			
66	2,672	1,251	943	703	261	1,000	786	1,851					1,483						3,440	305	337	414	346	45	1,216	16	62	736		1,508		21	418	1,013	711	19	663			2,237				149		2,762	000	1,480	3,858
150	4,027	1,880	1.421	1,132	393	1,510	1,184	2,790	2,079	2,110	1,601	1,601	2,213	7,797	7,797	2,673	5,450	5 234	5,234	455	503	617	527	692	1,851	239	060	1.058	35,	2.167		30	009	1,456	1,021	28	952	8,292	8,292	3,243	1,944	1,944	2,289	216	4,377	4,005		2,155	5,596
	1,751	760	618	461	171	540	515	1,213	904	920	703	703			3,358					200	221	271	227	298	797	104	39	417	2,326		1,368	13	261	633	444	12	414	3,605	3,605	1,310	845	1 010	986	570	1,885	1,725			2,410
61	1,629	989	575	425	154	496	482	1,117	825	835	645	645			3,085					172	190	244	215	279	678	67	32	350	1,982		1,136	-1-	233	514	370	7	319	3,227	3,227	1,182	811	811	873	282	1,676	1,539	7 0		2,208
.40	122	74	43	36	17	44	33	96	79	0 00	15 15	200	65	273	2/3	82	211	177	177	28	31	27	12	19	 08 80	37	L 71	110	344	108	232	9	780	119	74	120	9,5	378	378	228	34	122	113	===	209	186		707	202
TR	U.S. 20	- K	~~ %	CR.	CR •	0 00	 35	38	CR 57		. 81	90 00	2000	U.S. 20	57 .00	57	52	2 2	2	٦. م	× %	82	CR.	7 S	59	CR	CR.	7 2	U.S.127	263	263	TR -	U.S. 20	U.S. 24	110	TR	7.C	U.S. 24	U.S. 24	183	183	183	U.S. 24	7. K	27	U.S.23&	U.S. 24	U.S. 24	U.S. 25 U.S. 25
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793	707	***		795			196		707	161	83	V 0	H C	82	98		87	88		257			258			798			199		000	000		801		802		803	804	+00	802	89		00	2	91			92
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,	MOTOR VEHICLE TRAFFIC AT OHIO TRAFFIC SURVEY STATIONS—Continued
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V	Average daily traffic—1930,	total vehicles	3,325	1,513	1,451 1,522 182	144 181 142	270	662 862 52	25 517 453	04 00 00 00 00 00	637 518 281	2000	1,309	1,922 219 195 190	161 498 572 108	777 64 228	252 13 28	273	1,721	110	275	625 577	215	235
		dally total vehicles	4,997	2,273	2,180	223 281 221	317	1,028 1,339 81	39 803 704	46	901 989 805 437	85 416 1 348	1,408 2,033 1,201	2,985 340 304 294	251 773 888 168	120 99 354	391 21 44	423	2,673	170	424	1,307 915 961 870	345	377
n 1925	y	Total vehicles	2,152	979	939 98 5 123	122	182	582 35	349	27 20 418	430 350 190	181	. 612 884 522	1,298 148 132 128	336 386 73	52 43 154	170	184	1,162	314	314	402 422 386	150	164
Traffic in 1925	Average daily	Passen- ger cars	2,000	914 56	895 933 87	9 8 5 2 6 6 2 8 8	150	385 518 27	315	27 20 261	308 308 158	31 164 518	540 837 467	1,200 82 85 109	315 346 73	41 32 135	145	167	1,047	252	171	362 380 346	114	143
	Av	Trucks	152	65	44 52 36	233	32	645	34	001	345 322 323	170	55	98 66 19	21 20 40	-	25 2 0	17	115	15	15	42 40 40 40	36.2	21
	Route No.2		4 & U.S.	U.S. 23	U.S. 30	3 & 94 94 CR	94	12°	Z Z Z	AZ SAZ	- 12°C	TR CR	CR U.S. 42	CR 42	52 58 58 58 58 58 58 58 58 58 58 58 58 58	TR TR	-885 -28	71.00	18	252	573	U.S. 42	CR 248	-
	Direc-		S	≱zı	a≱z	ω¤≱	Zos	m≱z	»⊞⊠	Zof	a≱zo	m≱z	ız≰α	nα≱z	തല≽മ	ES SE	≱Zv	¤≱¤	:vZ	ωZo	nZ£	a≱zø	BZE	B
	Station		16	86	827		828	829		830	831	817	833	834	833		836	817	838	839	274	275	840	
	County		Marion		Medina																		Meigs	
V	Average daily traffic—1930,	total vehicles	1	1,511		1,293	1,127	2,265 1,746 960	1,068 1,068	2.594	1,022	891 91	1,177	269 105 119 48	232 464 372 238	80 1,420 1,248	1,357 1,160 70	125	1,298	222	74 283 240	3,282	209 4,141 4,141	1,874
		dally total vehicles	3,123	2,139	5,828 540	1,794 808 808		3,204	1,358	3,671	1,447	1,261	1,753	400 156 177 177	345 690 554 354	2,114 1,858			1,932	331	421 421 370	4,885	310 6,164 6.164	2,817
n 1925	,	Total vehicles	1,345	921	2,510	788 355 355		1,380	585 651 651	1,581	623 548 983	543	762	174 68 77 31	300 241 154	52 919 808	878 751 45	37 81 820	840	144 52	183	2,126 1,891 46	135 2,680 2,680	
Traffic in 1925	Average daily	Passen- ger cars	1,246	819		718 329 329	621	1,230 948 522	522 580 580	1,434	581 494 875	483	734	161 64 147	146 274 211 124	49 844 742	822 704 42	34 73	775	113	164	2,015 1,785 46	129 2,536 2,536	
	Aı	Trucks	99	102	242 21 83	26 26 26	999	116	711	125	42 54 108	09	28 29 13	24-71	30 8 80 8		56 47 3			31	19	1111	144 144 144	97
	Route No.2		U.S.422	0 00 00 00 00 00 00 00 00 00 00 00 00 0	CR 18 18	18 45 45	19	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	200	164 164	17 46 46	19 47 47	U.S. 30 U.S. 30	4 SKR	203 4 4 98	98 U.S. 30 U.S. 30	4 4 K	CR CR	U.S. 23 CR	S S S S	78.8 48.8	U.S. 23 U.S. 23 TR	CR U.S. 23 U.S. 23	4
	Direc- tion ¹		≱ µ	n B¤i	≥∾⊠	≱Zω	⊠ ≱;	Zopi	≷Zω	Zor	a≱z«	щZv	m\z	ω≅⊠Z	∞∺≥౽	≅eno:	Zom	NZ Z	: : :	≱z	see	≥Z∾¤	≱z«	z
	Station		94	96	267	268	269	270	271	272	273	818	819	820	821		822	823		824		825	826	46
	County		Mahoning									Marion												

42	133	135	72	296	275	32	123	15	94	,558				145	632	560	302	101	210	136	136	286	241	289	111	127	205	,335	654	297	,480			233	206	331			,026	341	634	503 754	636		-4.	192
67	94	212	113	465	432	51	193	23	147		857 2			225	984	908	490	163	340	221	221	460	387	465	113	186		438 2 645 1		437	124 3	036 1		343	304	488	279 3		511 1	501	934	741	936	004 4		283
29	41	92	59	202	188	22	84	10	64		594 3	_		99	432	395	213	71	48	96	96	202	170	204	49	81		195 3,		759	5,02			49	132	112		5,		- 80	904	183 1,		1,7	176 5,	123
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TR	TR B	CR	TR	70	D'A	TR	120	TR	71	U.S. 25	U.S. 25	U.S. 25	U.S. 25	202	202	∞ o	35	TR 78	200	90 (∞ ∝	∞ ∞	26	2 00	TR	TR IIS 40	U.S. 40	U.S. 25	CR	T.R.	69	400	CR CR	S.S.	25.	S.C.	U.S. 25	0.8, 25	4.6	CR	S S	S.S.	TR	11:	-SS	Z,
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Miami																Monroe										Montgomery				_																
238	315	53	76	120	69	64	751	438	714	30	105	207	226	392	50	160	187	319	116	10	302	1,040	1,040	1,030	686	893 893	31	731	698	425	53	47	386	79	73	£ 00	800		3,294		142	171	157 372	468	247	821
382	200	200	150	120	110	104	1,193	697	1,134	48	170	175	366	715		274	304	518	25	16	490	1.686	1,686	1,653	1,587	1,432	48	1,148	1,097	299	64 83	74	200	124	115	136	138	313	5,175	1,316	153	269	246 584	736	389	1,290
166	130	37	08	52	48	524	524	306	408	21	14	200	159	311	35	110	132	225	11	7 10	213	7-83	733	726	697	670	21	499	477	290	36	32	264	54	50	29	09		2,250		97	117	107	320	169	561
128	107	31	37	46	44	39	468	355	439	21	64	196	146	282	29	96	107	961	Ξ	202	203	641	641	685	656	595	× 5	461	409	252	24	24	236	51 43	48	32	100	106	2,091	530	80 44	96	220	282	147	521
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124 CR	124	TR 124	124	S.S.	143	31	31	124	124	TR	54	r TR	TR	117	TR	119	119	51	TR	T.Y.	CR	54	r TR	32	32	0	TR	29	48	84°	TR	7.R 29	29 CB	SS	SS		S.5.	55	201 U.S. 40	U.S. 40	202	71	202	202 U.S. 40	U.S. 40	71
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Meigs										Mercer																	Miami																			

	Amerage	traffic—1930,	vehicles	16 27 30 134		1,343	1,157		2,166 2,152 r 259	319	382 382	379 263 167	2,139 115 115 74	10 74 174 63	1,125 1,193	477 167 238	1,605	1,552		Ci Ci n	2,686 2,686 2,686	1,396	30
		Maxi- mum	total vehicles	25 44 48 218	1,318	2,163	232 1,863 508		3,498 3,475 419	515	515 122 616		3,455 186 120	16 120 281 101	214 1,817 1,927	770 269 384	2,592	2,531	3,734	5,259	894 4,379 4,379		48
pen	in 1925	lly.	Total vehicles	11 19 21 95	573	880	102 818 223	615 97 112	1,521	182	253	266 185 117	1,502 1,502 81 52	52 122 44	93 790 838	335	51	1,127	1,608	2,265	385 1,886 1,886	980	29
Continued	Traffic	Average daily	Passen- ger cars	11881	521 521 521	827	96 764 205	579 93 110	1,443	218	212	238 158 158 163	1,390	51 114 42	89 750 800	302 106 152	1,059	1,030	1,522	2,039	353 1,754 1,754	794	29
		Y.	Trucks	1 1 2 3 3 2 6								27.7.2.7.2.7.2.7.2.7.2.7.2.7.2.7.2.7.2.									32 132 132	186 186 0	
STATIONS		Route No.2		R222 R222 R222 R222 R222 R222 R222 R22	CR 61 61	0.3.30 & 61 U.S.30	& 61 CR U.S. 42 CR	U.S. 42 CR TR	U.S. 40 CR 40	555	AR 4	CR CR 76	U.S. 40 75 & 76	~~~~ \$888 \$1	156	CR 208 75	CR S	27.	U.S. 40	10 & 75 10 & 75	U.S. 40 U.S. 40	T. T	7.88
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SURVEY		Station		888	889	105	288	890	891	892	893	894	895	896	897	868	899	106	107	108	290	291	
TRAFFIC		County		Morrow				Muskingum														Noble	
OHIO T	, , , , , , , , , , , , , , , , , , ,	daily traffic— 1930,		850 914 205 248	356 214 1,064		3,564		1,751	1,537	1,748	1,818 330 40	37 142 125	300 247 234 215	329 283 140	152	230	419 419 141	161	598	76 55 341	332 335	310
AT O		Maxi- mum	dany total vehicles	1,251 1,346 301 366	524 315 1,566	1,624 313 313	5,299 5,299 3,325 3,376		2,603 2,603			2,703	230 202	488 416 384 350	534 460 228	246 21 1,070	1,070 369 369	674 674 230	262	973	124 90 554	540 545 545	504 166
TRAFFIC	Traffic in 1925	lly	Total vehicles	544 585 131	228 137 681	136	2,282 2,282 1,432	61 71 3,490	m == ==	-		1,164 211 28	100 88	212 180 167 152	232 200 200 99	107 9 470	470 162 162	296	114	423	54 39 241	273 235 237	219
	Traffic	verage daily	Passen- ger cars	486 468 125 146	211		2,143 2,143 1,352		3,264 1,013	1,194	1,011	1,052 191 27	25, 61, 61, 61, 61, 61, 61, 61, 61, 61, 61	192 152 149 142	216 176 87	432	147	286	106	385	42 31 203	230 213 216	198
HICLE		A	Trucks				139 139 76							20 28 10 10									
R VEHIC		Route No.2		2222	SSS 2	U.S. 40 U.S. 40	1122	CR CR U.S. 25	U.S. 25	444	48 & 11 S 40	U.S. 40	5555	CR TR	377	37 CR	782	377	TO THE	U.S. 42	S S S S S S S S S S S S S S S S S S S	95	CR CR
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2		Station		876	878		102	104	282	283	284	879	880	881	883	285	286	187	*00	885	886	887	
		County		Montgomery								Morgan						Morross	TATOLIOM				

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932	92	117	943	419	433	30	23	745	146	132	75	129	883	196	1,302	1,302	347	782	301	416	1,628	1,102	1,838	1,412	616	122 803	2,956		545 304	347	1,405	32	1,451	269	469
405	80	55 75 14 75 1	45	182	190	39	10	327	324 64	58	33	56	384	223	55	566 791	151	340	32	181	715	484	807	1,012	110	349	303		132	151	611	14 726	636	117	204
366	782	54	386	160	172	34	10	295	267	53	31 26	43 43	336	83	468	468	116	275	128	144	650	448	749	570 942	208	322	1,196	1,196	218	145 416	34	12 683	595	95	185
39	1981	₹⊶	24	22	100	00	00	32	32	52	200	13	480	791	086	106	35 96	65	4.24	37	65	36	28	70	32	27.	89	233	0 0	26	26 8	43	36	22	19
49 CR	555	200	300	114	00	U.S. 24 U.S. 24	TR	113	49	114	114	100	13.	204	37	75	TR 75	75	TR	115	13	373	13,37 & 75	U.S. 23	¥45	56	U.S. 23	56 23	159	159 U.S. 23	U.S. 23	7.R	E A	20°	CR
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918	919	0	920		295		296		297		921	023	776	923	924	925		926	927	298	299		6	876	929		930	931		932		933		934	
Paulding											Perry												·	Fickaway											
867	130	160	1,027	59	375 436	555	365	149	210	782	873	3,059	920	167	439	170	942	118		2,969	856	785	1,251	1,230	519	519	475	113	383	118	434	100	135	316	865
1,408	124	260	1,668	152	610 708	902	587	242	340	126	1,417	4,966	1,493	271	713	276	1,530	1,380	1,957	4,818	1,389	1,274	2,011	1,976	842	842	770	184	621	191	704	172	218	513	1,403
612	92	113	725	66	308	392	258	105	148	0 10 0	616	2,159	649	118	310	120	287	000 83	851 438	2,095	604 197	554	883	0000	366	366	335	200	270	833	306	48	95.00	223	019
585	86	111	675	29	246	361	215	93	104	S 4 8	208	2,002	-	102	266	988	625	200		1,928	585 178	578	793	748	342	338	305	711	251	86.	26	42	90	193	568
27	000	2017	50	. 13	33	35	43	12	4.0	14	108	157	96	200	44.	34.	40	40	137	167	19	69	90	120	24	7004	30	300	19	2 00 0	33	14	o ro z	30	42
U.S. 21 U.S. 21	7.7.5 XX0	145 75 75 75	U.S. 21	CR	9/	215 CR	200	TR2		555	163	102	163	365	622		7.55°	TR	CR	102	38	2 & 163 2 & 163	2 & 163	2 & 163	49	111 CD	500	113	111	TR:	900	114	CR CR	113	49
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	Average daily traffic—	total vehicles	3,016 3,016 3,016 3,017 3,017 3,002 3,002 3,002 3,002 3,002 4,48 8,88 8,88 8,88 1,109
		daily total vehicles	4 552 1,15332 1,153
Traffic in 1925	ly.	Total vehicles	1,979 1,979 1,979 1,006 1,
Traffic	Average daily	Passen- ger cars	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
	A	Trucks	0 + 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Route No.2		88888888888888888888888888888888888888
	Direc-		BZO BZOZOZOZOZOZOZOBBRZENOZOBBZOZOBBZOZOZOZOZOZOZOZOZOZOZOZOZOZO
	Station		949 950 952 953 953 304 305 306 955 956 957 959
	County	,	Portage
	Average daily traffic— 1930,	total vehicles	1084 1084 1084 1084 1084 1084 1084 1084 1086
	Maxi- mum	daily total vehicles	2010 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Traffic in 1925	ly	Total vehicles	13 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Traffic	Average daily	Passen- ger cars	1174 1174 1174 1174 1174 1174 1174 1174
	A	Trucks	
	Route No.2		56 8 6 8 6 8 6 8 6 8 8 8 8 8 8 8 8 8 8 8
	Direc- tion1		BONZABONZABONZABONZABONZABONZABONZABONZA
	Station		934 935 937 300 301 941 942 944 945 948
	County		Pike

268 306 557	819	481 513	86	278 216	1,746	1,522	991 274 468	192	838 614 393	225	1,480	1,480	2,929	2,929	2,557	2,795	2,859	1,754	661	302	443 195 132	168	169	454	106	50 46 062	963 163	828	917 182 148	27
407 465 846	1,244	731	131		2,654			292	1,274 934 598	343	2,249	1,802	4,495	4,495	3,924	4,289	4,449		1,060		313	269	271 292	729	175	74 1 546	1,546	1,329	1,472	44 76
177 202 368	541 110	318 339	57	184	1,154	1,006	655 181 309	127	554 406 260	149	978	776	1,936	1,936	1,690	53	1.916	1,159	461	312	309 136 92	1117	118	317	76	32	672	578	040 127 103	33
158 151 322	503 89	293 314	51		1,108	896 452	591 158 283	121	518 370 232	143 440	904 904 9064	904 729 729	1,832	1,832	1,493	37	1,698	1,043	425	190	126	857	102 113	266	64	30	552 100	516	5/0 126 103	19
19 21 46	38 21	25 25 25	9 80	9 * 0	46	110	64 23 26	100	36 28 28	32	47.	4 4 4	104	104	197	16 206	218	116	36	21 28	10	32	16	58	12	110	120	9 9 9	*	*
96 178 13	CR CR	13.5	CR	CR CR S	U.S. 30	U.S. 42 CR	97 CR U.S. 42		13 CR	1R	19	133	5 & 11 S 47	5 & U.S. 42	U.S. 42	1 R U.S. 30	& 39 U.S. 30	39 39 39	159	180	OR 1R	180	CR	==(200	20.8	288 CR	28 K	CRS SRS	CR
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Richland						,													Ross											
130 99 92	50	134		2,164 2,164 756	1,998	1,998	354 113 127	208	258 403	545	65	156	109	157	520	430	57	191	10	1,027	529 769	522	104	207	174	75	641	457	514	124
212 161 150	129 80 244	218		3,517			569 182 205	\$38 198	467 653	1,000	106	253	188	255	844	791	133	310	16	1,665	1,010 858 1,247	846 846	132	332	280	121	1,029	369	782	189
92 70 65	35	95	251	1,529	534	-	080	147	203 203 284	32.4 435 208	46	110	77	1111	367	303	82 4 5	135	186	179	373 542	368	73	191	123	53	452	302	340	130
64	35	368	228	1,442	1,330	1,330	73	139	254 254	381 144	46	104	71	96	321	300	28	***	182	175	361 446	304	555	140	115	419	414	278	314	124
13	0 **	10	23	34	34 82 82	18	27	* 5	30	54 54 64	* 6	9	9*	15	35	35	12 ×	**	* 4	71	12 96	64	4 m	200	¬ ∞ ←	38	38	24	26	100
224 224 CR	122 122	188f	XX:	111 6	6 11 :	100	U.S. 40 U.S. 40	¥8,5	106	106&113 106 189	1R 190	17	33 TR	15 & 33	109	65 15 & 33	CR CR 17 & 17	15 & 17 TR	TR 17	TR TR	1	961	06 CR	17 00	15&115 TR	33	33 CR	178 CR	178 CR	2,8
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	Average daily traffic—1930.	total vehicles	46	4,201	4,201 929 1,122	1,118 1,109	102 161	1,148 1,148	1,840	1,389 489 396 470	2,569	226 718 909	1,330 618 710	990	361	340 409 382	417 183 309	248 815 365	226 624 87	198 201 155	426	618 1,636 4,054	5,465 1,893 1,817
		dally total vehicles	156	4 -4 10 1	1,762	1,742	159	220 291 1,803	2,890	622	3,786	334 1,058 1,339	1,960	1,458	531	501 503 563	614 269 455	366 1,201 538	334 920 129	292 297 228	308	2,410 5,973	8,052 2,790 2,677 2,677
in 1925		Total vehicles	32	2,897	641 774	771	111	128 792 792	1,269	337	1,646	145 460 582	852 396 454	634	36 231 218	218 262 245	267	159 522 234	145 400 56	127 129 99	273	396 1,048 2,597	3,501 1,213 1,164
Traffic in 1925	Average daily	Passen- ger cars	24 64	2,709	2,709	689	848	1118 698 698	1,164	236	1,493	114 414 540	796 368 388	560	36	216	228 109 188	153 494 207	143 362 54	120 115 82	235	360 930 2,268	3,045 1,130 1,094 85
	A	Trucks	00 44 5	188	188 52 61	76	×927	2046	105	377	153	31 46 42	28 28 66	74	22	4 4 4 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	39	28 27	382	14	38	36 118 329	456 83 70 12
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	County		Sandusky								Scioto												
	Average daily traffic—1930,	total vehicles	257	418	818 903	542	102	209 209 570	536 1,068	823 823 535	1,346	780 930 153	1,092 1,936 847	1,902	139 200	2,897	131 828 957	26 80 80	268 186 45	26 42 12		3,031 125 2,603	3,980 3,734
		daily total vehicles	412	458 672 780	1,313	869 989	170 184 163	209 336 915	1,696	1,307 1,307 886	2,138	1,239	3,076	3,022	317	4,595	207 1,313 1,518	78 41 41	426 294 71	41 67 18	18	4, 807	285 479 6,314 5,922
n 1925	>	Total vehicles	179	292 339	571	378	4,80,71	146 398 398	374	389 574 373	939	544 649 107	762 1,351 591	1,327	138	1,998	571	34 1 3 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	128	20.8		2,090	2,745 2,745 2,575
Traffic in 1925	Average daily	Passen- ger cars	137	256	530	310	4 7.0 4 5 4 7.0 0 5	138 349 349	324 699	351 351	871	515 615 102	1,254	1,256	132	1,908	527 527 617	27	160 116 29	24 44	29	1,922	111 196 2,587 2,372
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117 515 235 246	1119 221 67 67 200	294 163 299 469	366 2,181 2,181	688 688 897 4	1,024	2,201	1,417	4,220	1,552 1,424 2,997 2,553	814 849 3,924 653	3,519 1,589 1,191	724 552 253 3.846	3,609 2,939 2,585	2,680	1,644	2,169	4,344	2,964	8,547 4,909	4,533	1.017
51 224 102 107	32 29 29 87 87	128 71 130 204	159 958 958	302 302 394 783	445	604 957 688	183	153	619 (1303 (110	354 369 1,706	1,530 691 518	315 240 110 672	1,569	165	715	943		5,583			438
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	Average daily traffic—1930,	total vehicles	1,590	1,177	. 218	809 809	1,003	2,237	1,196	1,196	2,307	507	340 412 811	709	171	281 333	2,525	681 2.670	2,222	3,904	4,619	730	3,824	34	2,663		590 162	$\frac{246}{1,095}$	1,095 2,893 3,282	202
	Maxi- mum	daily total vehicles	2,229	1,649	954 954	1,134	1,405	3,135	3,696	3,330 1,532 1,555	3,234	209	577	994	239		3,574	3,778	3,144	5,524	6,536	1,013	5,410	49	3,769	811	225	342	1,549 4,094 4,644	286
in 1925	<u> </u>	Total vehicles	696	717	415	493 441	611	1,363	1,607	1,4448	1,406	309	251 494	432	334	171 203	1,539	1,627	3,778	2,379	2,814	445	2,330	21	1,523	356	200	150	1,763 2,000	123
Traffic	Average daily	Passen- ger cars	816	604	396	446 446		1,275	1,532	1,389 599 621	1,326	266	207	354	259	153	1,427		3,493			406	2,136	18	1,515	325	986	134	1,648	336
	A	Trucks	153	113	10	47	- 12 00 - 12 00 - 12 00	88	75	55 55	137	10	744	78	72	18 41	112	122	285	257	216	39	194	200	108	312	134	41.	41 115 127	22
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	County		Trumbull												•															
	Average daily traffic— 1930,		3,376		2,314			3,598	3,134 5,570	5,083		1,620	1,913	5,077		1,550	2,942	448	1,527	986	854		4,290		124	6,260	4,187	2,109	1,223	3,439
	Maxi- mum	daily total vehicles	4,879		3,344		179	4,731	4,122	6,684	5,950	2,130	2,516	6,677	8,050	2,038	3,869	589	2,008	1,290	1,122 6,093	5,186	5,696 2,464	2,006	165	8,310		2,800		4,565
n 1925	у	Total vehicles	2,101	639	1,440	1,342	1,949	2,057	1,792	2,906	3,147		1,094	- m	an ar	120 886	1,050	256	873	561		2,255	2,453	864	711	3,579		1,206		1,966
Traffic in 1925	Average daily	Passen- ger cars	1,901	555	1,298	1,210	1,740	306	1,585	2,578	2,274	813 813 067		2,538	2,928	788	1,542	239	766	521	425	2,251	2,251	784	71	3,257		1,113	638	1,781
	Av	Trucks	200	88	142	132	209	231	207	328	313	113	127	365	572	860	140	177	107	53	296	259	202	80	0,00	322	192	93	72	185
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965 159 200	1,082	1,128	329	99	1,056	286	302 1,066 1,049	128 140 2,108	2,056	410	594 594 406	866 782	388	2,313	1,732	1,764	324 2,093		681 512 512	237	117	524	772	1,435	305	648	117 169 327	569	332
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MOTOR VEHICLE TRAFFIC AT OHIO TRAFFIC SIIRVEY STATIONS_Continued

Arronage	daily traffic—	vehicles	528 528	231 391	607 607	344	1,179	226 1,200 2,130	983	657	800 1,773 1,349	2,173	4,718	3,977	2,115	153 164 317	214 510	305 305	29 656	638 1,154	1,871	1,649	2,072	1,229	983 282	262	298 1,849	1,709 271 1 876	1,659
	Maxi-	daily total vehicles	858 858	375 635	987	553	1,897	364 1,931 3,427	1,583	1,057	1,249 2,767 2,104	3,390	7,362	6,205	3,300	255	334	476	32 46 1,024	2,011	2,890	2,548	3,049	1,899	1,519	426 85	3,002	2,774	2,693
Traffic in 1925	ly.	Total vehicles	373	276	429	243	733	160 848 1,505	695	464	1,203 915	1,474	3,201	2,698	1,435	111	346	207	20 445	883 1 206	1,269	1,119	1,339	834	199	38	1,305	1,206	1,171
Traffic	Average daily	Passen- ger cars	346	132 261 261 353	0 00 00 0 00 00 0 00 00 0 00 00	222	754	150 748 1,349	633	423	482 1,107 850	1,349	3,063	2,581	1,289	203	336	178	382	785	1,168	1,022	1,271	763	171	161 34	1,224	1,142	1,107
	A	Trucks	27	31 15 40	414	21 21	71	100 100 156	62	41	961	125	138	117	146	36	000	53 70 80 80 80 80 80 80 80 80 80 80 80 80 80	63	98 113	101					4.6		40 48 44	
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	County		Washington							Wayne															Williams				
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APPENDIX IV

(State Highways Carrying More than 1,500 Motor Vehicles Per Day, by Sections of the State)
NORTHEASTERN TRAFFIC SECTION

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1936
U. S. 30	Massillon—Canton	. 5	5,583	407	0.070
<u>U</u> . S. 20	, Cleveland—Elvria	6	5,288	485 283	8,970 8,070
U. S. 422 U. S. 25	I Ni.es—Youngstown	5	3,854	334	6,320
169	Fellysburg—Toledo	4	3,810	293	5,400
19	Carten—Niles.	2	3,778	285	6,200
19 U. S. 24	Toledo—Maumee	2	3,681 3,605	347	5,920
U S. 20	Cleveland—Painesville	9	3,378	378 324	5,770
60	I Asmand—Ict. U. S. 30 & 60	7	3,102	382	5,630 4,530
3		17	3,015	388	5,220
J. S. 20	Lorain—Elyria Clyde—Fremont	3	2,983	338	4,550
6	Cuyahoga Falls Rayenno	6	2,739	183	3,970
J. S. 30		11 4	2,680 2,571	297	4,620
8		5	2,453	124 202	3,790 4,290
J. S. 20		8	2,429	183	3,700
69	1 I Oledo—Wichigan line	2	2,410	202	3,860
27	Walten—Ict. 10	4	2,379	257	3,900
	Toledo—Sylvania Hubbard—Youngstown	5	2,367	355	3,790
8-U. S. 20		3 9	2,330	194	3,820
J. S. 20		18	2,322 2,307	194 178	3,280
46	1 101cu0 101, 183 & 240	1	2,255	262	3,520 3,610
J. S. 20 J. S. 20–102		11	2,254	161	3,340
6	Fremont—Loledo	28	2,249	171	3,210
	Barberton—Doylestown. Cleveland—Akron.	4	2,194	218	3,840
-42	I Mansheld—Anjand	19	2,133	211	3,730
3	Canton—1ct. 17 82 43	12 14	2,130	122	3,160
77	1 Toledo—Michigan line		2,101	200 184	3,380 3,290
S. 21		2 4	2,012	156	3,290
5 . S. 20	1 Cleveland—1ct. 85 & 175	2	2,000	200	3,020
S. 20	Painesville—Geneva. Bellevue—Clyde	15	1,990	163	3,030
. S. 30	Mansfield—Ict 30 & II S 30	6.	1,942	164	2,820
. S. 25	Bowling Green—Hancock Co. line	13	1,916	218	2,900
. S. 30		13	1,882 1.871	100	2,680
. S. 422		4	1,868	171	3,010 3,020
)	Lucas—Ict. 39 & U. S. 30	4	1.847	206	2,800
		7	1,835	154	2,950
. S. 20	Youngstown—Jct. 18 & 45. Conneaut—Pennsylvania line	9	1,830	201	3,000
. S. 422		1	1,816	98	2,690
	. Hudson—1ct. 91 & 36	23	1,797 1,792	128	2,580
		21	1,779	207	3,130
		8	1.762	120	2,850 2,690
		9	1,756	70	2,490
		4	1,719	139 · ·	2,820
	Justus-Navarre	3	1,717	157	2,760
S. 422	Luain—Cuvanoga Co. line	2 9	1,706	192	2,740
S. 422	raikillail— warren	15	1,701	109	2,600 2,630
S. 25		11	1,660	112	2,630
5. 30		11	1,620	94	2,600
4	Canton—Tuscarawas Co. line	10	1,590	232	2,490
	Cleveland—Twinshurg	5	1,581	147	2,490 2,590
	Ravenna—Jct. 36 & 80.	6	1,540	89	2,550
	Delta—Wauseon	4	1,534	142 78	2,340 2,130

SOUTHWESTERN TRAFFIC SECTION

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
74	Hamilton—Warren Co. line Hamilton—Cincinnati Harmony—Springfield Sharonville—Cincinnati. Dayton—Brandt	12 22 10 3 4 9 12 11 13	2,917 2,586 2,379 2,353 2,309 2,282 2,250 2,216 1,906 1,800 1,569	451 279 214 223 96 288 159 145 196 153 143 149	4,270 4,040 3,690 3,560 3,540 3,340 3,290 3,400 2,770 2,670 2,350

EAST-CENTRAL TRAFFIC SECTION

Route	· Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
U, S. 40	Bridgeport—Bellaire New Philadelphia—Uhrichsville. Zanesville—Jct. 10 & 75. Bellaire—2 miles from Bellaire. Dover—Jct. 6 & U. S. 21. Cambridge—Jct. U. S. 21 & 215. Cambridge—Jct. U. S. 40 & 265. Zanesville—Licking Co. line.	2 7 4 2 6 9 2 9	3,209 2,427 2,313 2,265 2,164 1,916 1,776 1,731 1,613 1,590 1,524	431 253 263 226 340 200 193 120 86 232 120	4,850 3,720 3,440 3,220 3,320 2,850 2,580 2,520 2,300 2,490 2,340

NORTHWESTERN TRAFFIC SECTION

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
U. S. 40	Columbus—West Jefferson West Alexandria—Montgomery Co. line Delaware—Columbus. Reynoldsburg—Columbus. Marion—Jet. 4 & U. S. 23 Columbus—Grove City Marion—Delaware Findlay—Wood Co. line. Lima—Wapakoneta Columbus—Shadeville. Sidney—Miami Co. line. Newark—Jet. 16 & 47 Columbus—Westerville Mt. Vernon—Bangs Findlay—Lima. Galion—Jet. U. S. 30 & 61 Linnville—Muskingum Co. line Lima—Jet. U. S. 30 & 69 Urbana—Clark Co. line Eaton—Newhope.	3 15 7 2 5 18 5 11 6 6 5 7 4 26 1 8 13	3,050 2,586 2,477 2,184 2,152 2,019 1,896 1,882 1,810 1,795 1,709 1,698 1,665 1,613 1,596 1,596 1,599	186 279 160 137 152 172 101 100 125 129 143 155 122 104 110 106 86 134 149 87	4,560 4,040 3,740 3,400 3,320 3,150 2,860 2,680 2,690 2,820 2,670 2,560 2,410 2,460 2,360 2,300 2,250 2,350 2,160
	Total	162			

SOUTHERN TRAFFIC SECTION

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
U. S. 52 4–73	Portsmouth—Jct. 125	10 3 5	3,598 2,561 2,379 1,807 1,639 1,536 1,505	228 300 214 135 274 178 156	5,730 4,000 3,690 2,820 2,400 2,230 2,130
	Total	23			
	Total, all sections	858			

APPENDIX V

(State Highways Carrying Between 600 and 1,500 Vehicles Per Day, by Sections of the State)

NORTHEASTERN TRAFFIC SECTION

Route	Highway section °	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
U. S. 42	Cleveland—Medina	17	1.497	139	2,370
19	Salem—Westville	7	1,490	117	2,190
36 82	Newton Falls—Warren. Warren—Pennsylvania line	8	1,490	112	2,450
252		14	1,489	91	2,440
U. S. 20	Wakeman—Norwalk. Jct. 23 & 183—Jct. 246 & 183 Warren—Cortland. Jct. U. S. 30 & 60—Jct. 5 & 6 & U. S. 30	1 11	1,446 1,413	221 105	2,340 2,000
183	Jct. 23 & 183—Jct. 246 & 183	î	1,410	228	2,260
36	Warren—Cortland	6	1,404	92	2,300
U. S. 30	Jet. U. S. 30 & 60—Jet. 5 & 6 & U. S. 30	12	1,404	77	2,060
6	Jct. 19 & 6—Jct. U. S. 21 & 6. Youngstown—Pennsylvania ine.	6	1,388	163	2,060
44	Ravenna—Jct. 18 & 44.	5 3	1,378 1,376	102	2,260
46	Ashtabula—Jefferson	8	1,362	200 124	2,100 2,020
2	Huron—Sandusky	8	1,345	89	1,940
3		15	1,339	133	1,970
91	Wooster—Jct. 3 & 91 Jct. 57 & 254—Jct. 2 & 254. Wooster—Jct. 94 & U. S. 30. Youngstown—Jct. 164 & 7	4	1,323	130	2,310
254	Wooster—Ict 94 & II S 30	7	1,291	102	2,010
7	Youngstown—Jct. 164 & 7	8	1,282	107	1,890
2	Archbold—Williams Co. line	4	1,251	157 73	1,890 1,770
263	Toledo-Ict, 263 & U. S. 20	5	1,242	193	1,770
19	Westville—Harrishiirg	12	1,240	124	1,870
261	Kent—Jct. 18. Loudonville—Jct. 3 & 97. Sylvania—Jct. U. S. 20 & 263.	4	1,240	124	1,870
263	Sylvania—Ict II S 20 & 263	3	1,230	70	1,800
43	Canton—Waynesburg.	3	1,218	165	1,950
36	Doviestown—wooster	11	1,206 1,197	180 95	1,940
43	Cleveland—Aurora.	15	1,185	108	1,760 1,920
14	Ravenna—Edinburg	6	1,171	113	1,780
241	Inland—Massillon	8	1,163	370	1,930
18 18–57	Medina—Jct. 18 & 253 Shelby—Mansfield	3	1,162	115	1,720
U. S. 30	Mansfield—Crawford Co. line.	10	1,159	116	1,750
175	Cleveland—Painesville	11 14	1,153 1,145	53 88	1,720
101	Sandusky let 101 & 34	8	1,134	150	1,780 1,640
18	Akron—Jct. 18 & 43. Kents—Jct. 18 & 43. Loudowills—Jct. 11 & 43.	6	1,100	91	1,760
43	Loudonville Jet II S 20 & 60	3	1,096	117	1,670
U. S. 21	Loudonville—Jct. U. S. 30 & 60. Summit Co. line—Jct. U. S. 21 & 18.	10	1,092	. 46	1,600
42	Mansfield—Lexington.	11	1,088	76	1,810
164	Jct, 104 & 17—Jct, 7 & 164	5 7	1,082	126 139	1,640 1,780
57 U. S. 24	Elyria—Grafton	6	1,036	84	1,580
U. S. 24	Maumee—Waterville	4	1,002	118	1,600
61	Canfield—Jct. 19 & 46.	1	983	108	1,610
43	Plymouth—Shelby Waynesburg—Carroll Co. line.	7	978	74	1,480
58		. 1	977 972	99	1,390
17	Barberton—Ict. 17 & XD	19	972	65	1,480 1,480
2	verminion—riuron	10	965	55	1,390
93 U. S. 21	AKTON—1CL, 93 & Z30	8	962	88	1,680
U. S. 20	Massillon—Jct. U. S. 21 & 236. Woodville—Jct. U. S. 20 & 102.	2	958	130	1,540
U. S. 21		4 5	958	89	1,390
84	Madison—Ict. 85	27	943 938	136	1,520
U. S. 23–U. S. 24.1	loledo—Michigan line		928	107	1,450 1,490
18	Voungstown—Pennsylvania line	2 3	921	102	1,510
94	Orrville—Jct. U. S. 30 & 94 Jct. 18 & 44—Jct. 17 & 44 Part Citaton Oct. Health	2	883	98	1,150
163		5	870	82	1,320
59	Elvria—1ct, 59 & 60	10	868	120	1,230
183	Maumee 1ct 746 & 183	11	863 845	127 34	1,320
17	Barberton—Western Star	4	820	115	1,350 1,520
16	Niles	. 8	808	114	1,330
5–6	Ashland—Rowsburg Jet. 18 & 80—Jet. 18 & 45. Lodi—Ashland	7	807	53	1,190
U. S. 42	Lodi—Ashland	15	793	73	1,270
U. S. 21	Lodi—Ashland. Jct. U. S. 21 & 17—Jct. U. S. 21 & 93.	17 12	786	41	1,150
3–61			774 769	66 76	1,350
01	Clyde—Jct. 101 & 34 Jct. U. S. 322 & 45—Jct. U. S. 322 & 46 Marblehead—Port Clinton. Nartos Pulls Let 26 & 90	3 7	768	76	1,110 1,110
U. S. 322	Marblehend — Port Clinton	9	764	160	1,130
36	Newton Falls—Jot. 36 & 80.	11	745	79	1,060
13	Kent—Ict. 14 & 43	9	721	62	1,100
J. S. 30	Winerva—Ict. U. S. 30 & 177	5	720	128	1,100
i6	Michigan line—Jct. 2 & 66	12	720 718	70 60	1,160 1,020
		A 44	110	00	1.020

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
60-6	Ashland—Savannah Norwalk—Fitchville Canfield—Columbiana Co. line Fremont—Bettsville. Brighton—Jct. 18 & 253. Warren—Bristolville Jct. 18 & 58—Jct. 17 & 58. Canfield—Pennsylvania line Jct. 18, 20 & 4—Seneca Co. line. Fremont—Port Clinton Mansfield—Jct. 13 & 178. Lexington—Bellville. Youngstown—Pennsylvania line. Minerva—Alliance. Wauseon—Henry Co. line Fremont—Seneca Co. line. Canfield—Jct. 17 & 80. Oak Harbor—Jct. 102 & 163. Perrysburg—Woodville. Conneaut—Jct. 7 & 83. Louisville—Jct. 7 & 82. Cortland—Niles. Jct. 17 & 13—Seneca Co. line. Cleveland—Jct. U. S. 21 & 176.	15 6 6 12 12 12 4 5 20 9 14 8 3 4 9 17 10	702 693 687 683 681 667 665 661 660 658 655 651 639 637 634 632 629 629 627 616 611 610 609	38 50 66 54 57 41 62 63 78 52 44 71 84 59 65 107 46 105 53 79 101	1,030 980 1,130 980 1,040 1,100 970 1,080 940 940 1,070 1,070 1,030 870 910 1,000 890 890 890 1,000 1,000 870 930 990 1,000 870 980
	Total	836			

SOUTHWESTERN TRAFFIC SECTION

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
U. S. 40. 3. 51. 9. U. S. 52. 48. 4. U. S. 50. 9. U. S. 27. 129. U. S. 27. 4. 122. 4. 4. 32. 48. 53. 126. 11. U. S. 42. U. S. 27-126. 29. 51. U. S. 50. 27. 70. 125. 264.	Harmony—Madison Co. line. Cincinnati—Jct. 3 & 126. Dayton—Jct. U. S. 40 & 51. Hamilton—Sevenmile. Cincinnati—Jct. U. S. 52 & 128. Dayton—Jct. U. S. 52 & 128. Dayton—Jct. U. S. 40 & 48. Dayton—Fairfield. Cleves—Indiana line. Cincinnati—Hamilton Indiana Line—Jct. U. S. 27 & 130. Hamilton—Jct. 129 & U. S. 27. Jct. U. S. 27 & 129—Jct. U. S. 27 & 130. Germantown—Jct. 4 & 73. Middletown—Preble Co. line. Dayton—Germantown. Newtown—Clermont Co. line. Cedarville—Xenia. Dayton—Centerville. Springfield—Xenia. Jct. 126 & 128—Indiana line. Xenia—Jamestown. Sharonville—Warren Co. line. Cincinnati—Ross. Covington—Darke Co. line. Jct. U. S. 40 & 51—Darke Co. line. Milford—Madisonville. Madisonville—Cincinnati. Springfield—Lisbon. Cincinnati—Clermont Co. line. Cincinnati—Clermont Co. line. Cincinnati—Clermont Co. line.	11 57 77 78 84 99 100 44 48 86 111 38 77 144 77 100 51 100 44 32 77 55 88	1,354 1,298 1,197 1,164 1,163 1,142 1,121 1,052 1,029 1,001 972 947 922 887 869 829 788 756 754 750 745 740 728 700 682 663 628 606	59 166 71 92 150 110 108 144 170 88 74 74 144 126 72 117 74 119 62 76 51 71 133 49 58 187 68 50 78 58	1,970 1,900 1,870 1,800 1,700 1,780 1,750 1,540 1,550 1,550 1,500 1,460 1,420 1,380 1,270 1,230 1,120 1,100 1,030
	Total	202			

EAST-CENTRAL TRAFFIC SECTION

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
7	Cambridge—Zanesville. Mingo Jct.—Steubenville. Uhrichsville—Newcomerstown. Jct. 10 & 75—Perry Co. line. Coshocton—Jct. 16 & 234. Salem—E. Palestine.	17 5 4	1,391 1,310 1,209 1,127 1,124 1,040	92 209 143 68 92 108	2,000 1,990 1,800 1,600 1,590 1,600

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
8 6 77 43 U. S. 22-43 214 16 77 6 7 6 7 U. S. 30 35 16 151 45 39 7 80 43 77 8 19 U. S. 22 6 U. S. 21	Dover—Jct. 8 & 80. Dennison—Jct. 6 & 151. Zanesville—Duncan Falls. Malvern—Stark Co. line. Steubenville—Jct. 43 & U. S. 22 Bellaire—Jct. U. S. 40 & 214. Jct. 16 & 234—Jct. 16 & 75. Zanesville—Dresden Cadiz—Harrisville. Yorkville—Bridgeport Lisbon—East Liverpool Jct. U. S. 40 & 35—Jct. 35 & 149. Coshocton—Jct. 16 & 77 Smithfield—Mingo Junction Salem—Lisbon. Dover—Jct. 39 & 234. Steubenville—Yellow Creek. Minerva—Jct. 43 & 80. Malvern—Carrollton Dresden—Jct. 16 & 77 Barnesville—Jct. U. S. 40 & 8. Salem—Mahoning Co. line Jct. U. S. 22 & 152—Jct. U. S. 22 & 43 Harrisville—Bridgeport Cambridge—Newcomerstown	57 73 44 77 33 144 110 33 112 88 113 9 9 8 7 110 2 2 5 115 115 115 115 115 115 115 115 1	1,025 990 980 977 968 936 930 906 904 901 860 851 849 830 822 759 755 726 725 719 713 687 651 647 621	109 122 186 99 119 74 449 46 48 58 98 68 73 85 73 128 150 82 67 88 102 66 75 69 58	1,530 1,460 1,400 1,390 1,470 1,380 1,310 1,290 1,380 1,260 1,200 1,200 1,200 1,210 1,130
	2000	265			

NORTHWESTERN TRAFFIC SECTION

11. U. S. 40. 3.	Newhope—Indiana line. West Jefferson—Clark Co. line.			trucks	daily motor vehicles-1930
3		6	1.412	82	2,000
	Centerburg—Westarville	13	1,354	59	1.970
	Centerburg—Westerville Bryan—Fulton Co. line	18	1,308	100	1,850
12		10	1,252	73	1,770
31	I Mai vsvine—ict. 31 ov ini .	6	1,213	134	1,730
117		13	1,210	10.1	1,810
U. S. 30	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9	1,207 1,203	125	1,850
13		11	1,189	56 88	1,700
9	Greenville—Jct. 9 & 51.	2	1,189	86	1,700
U. S. 40	Columbus—Jet. 10 & 47	22	1.185	97	1,680 1,770
U. S. 30	Ict. U.S. 30 & 61—Righland Co. line	8	1,182	50	1,690
32	Jct. U. S. 30 & 61—Richland Co. line. St. Marys—Moulton.	1	1,153	53	1,720
117	Lima - westimmster	4	1,139	74	1.620
31		6	1,132	67	1,730
3	Democracy—Mr. vernon	9	1,129	130	1,730
107		8	1,080	38	1,530
16	Newark—Ict. 10 oz 207	2	1,077	92	1,530
U. S. 40		15	1,055	126 53	1,510
32 15		6	1.044	79	1,510
U. S. 23		15	986	54	1,480
31		2	970	68	1,410 1,380
18		9 2	966	110	1,370
U. S. 25	Defiance—Jct. 18 & 15 Anna—Sidney Browney Let A & H. C. C.	2	961	110	1,360
4	Bucyrus—Jct. 4 & U. S. 23	7	958	57	1,390
12	ArcadiaFindiav	14	948	67	1,420
U. S. 30		7	947	111	1,350
13	INCWALK — IACKSONTOWN.	13	946	66	1,450
31		6 7	940 925	82	1,340
122 U. S. 30–61		6	922	76 126	1,440
9		3	915	55	1,420 1,290
Ü. S. 30		8	911	79	1,290
118		14	895	41	1,380
11	Van Wert—Rockford. West Alexandria—Eaton. Little Sandricker. Let 4 & H. S. 22	11	894	67	1,270
U. S. 23	Little Sandusky—Jct. 4 & U. S. 23	5	890	67	1,260
U. S. 30	Deiphos—van wert	10	880	57	1,360
62		1?	878	54	1,240
U. S. 30	July 0, 0, 0, 00 or 193—101. U. S. 30 or 60	9 2	867	56	1,260
32		2	852 829	58	1,200
31		8	829	67	1,180
9	Greenvine—ret, y az pa	8	828	63 52	1,180
13		11	818	62	1,170
U. S. 30		17	815	79	1,170 1,180
U. S. 42.		4	808	66	1,180
	Delaware—3 mi. north of Delaware	3	779	85	1,100

Route	· Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
31-161	Jct. 257 & 161—Jct. 31 & 161 Tiffin—Jct. 17 & 18. Van Wert.—Indiana line. Mt. Gilead—3 mi. north of Delaware. Greenvile—Jct. 29 & 71 Jct. 29 & 71—Miami Co. line Lima—Jct. 33 & 115. Greenville—Jct. 121 & 200 Bryan—Jct. 9 & 15. Urbana—West Liberty. Celina—Indiana line Jct. 9 & 51—Montgomery Co. line. Newark—Jct. 79 & 207 Findlay—Jct. 15, 17 & 186 Crestline—Jct. U. S. 30 & 61 London—West Jefferson. Bryan—Indiana line Grove City—N. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—W. Pickaway Co. line—Hicksville—Jct. Co. Rd. to Mark Center Jct. 17 & 4—Huron Co. line Hicksville—Jct. Co. Rd. to Mark Center Jct. 9 & 54 Bucyrus—Jct. 5 & 182 Greenville—Indiana line Napoleon—Fulton Co. line Tiffin—Sandusky Co. line Tiffin—Sandusky Co. line Tiffin—Sandusky Co. line Celina—Jct. 9 & 64 Urbana—Jct. 9 & 69 Jct. 17 & 100—Huron Co. line Jct. 161—Jct. U. S. 42 Bryan—Farmer	3 2 14 19 1 9 3 3 2 10 11 17 17 5 2 10 13 8 13 2 10 7 6 3 4 2 11 5 11 7 6 11 7 7 7 7 8 11 11 11 11 11 11 11 11 11 11 11 11 1	754 754 748 748 740 728 723 719 718 715 712 708 696 690 687 685 684 675 273 667 660 657 655 641 640 638 637 634 629 625 609 609	78 73 32 55 49 41 65 52 63 41 54 46 38 40 60 47 30 78 36 85 92 45 46 59 34 27 79 58 28	1,130 1,080 1,080 1,310 1,030 1,100 1,020 1,010 1,010 1,010 1,010 1,010 1,010 1,000 970 970 970 960 1,020 950 940 940 930 930 1,040 930 930 1,040 930 930 1,040 930 930 870 970 970 880 870 950 880 870 950 860
	Total	679			

SOUTHERN TRAFFIC SECTION

Route Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930			
U. S. 23. Lucasville—Portsmouth. 11. Chillicothe—Jct. 11 & 104. 12. S. 52. Franklin Furnace—Ironton. 31. Chauncey—Jct. 31 & 26 N 139. Portsmouth—4 mi, north of Portsmouth 239. Jct. 7—Jct. 73. 31. Logan—Haydenville. 13. Lancaster—Sugar Grove U. S. 23. Chillicothe—Jct. U. S. 23 & 159. 75. Crookesville—Muskingum Co. line Wilmington—Clarkesville U. S. 50–31. Athens—Jct. 31 & U. S. 50. 3. Washington C. H.—Jct. 3 & 238. 31. Haydenville—Chauncey. U. S. 23. Circleville—Fanklin Co. line. U. S. 50–11. Chillicothe—Jct. 11 & U. S. 50. 3. Wilmington—Sabina. U. S. 50. Rainsboro—Hillsboro U. S. 23. Waverly—Piketon. 31. Logan—Jct. 31 & 80. 7. Rainsboro—Hillsboro U. S. 23. Chillicothe—Jct. 73 & 239. U. S. 23. Chillicothe—Dct. 73 & 239. U. S. 23. Chillicothe—Verly 13. Jacksonville—Chauncey. 13. Jacksonville—Chauncey. U. S. 23. Chillicothe—Waverly 13. Jacksonville—Chauncey. U. S. 23. Piketon—Ct. 37 & 75. 37-10. Lancaster—Jct. 37 & 10. Williamsport—Circleville. U. S. 21. Caldwell—Jct. U. S. 21 & 146. U. S. 23. Piketon—Lucasville 104. Andersonville—Jct. 11 & 104. Gallipolis—Pomeroy. U. S. 24. Lebanon—Butler Co. line 14. Andersonville—Jct. 11 & 104. 7. Gallipolis—Pomeroy. U. S. 42. Lebanon—Butler Co. line 14. Hooker—Lancaster 15. Crooksville—Jct. 37 & 75. 16. Trontor—Jct. 75 & 141. 31. Sugar Grove—Jct. 31 & 180. 7. Crown City—Eureka.	2 12 2 4 1 5 6 4 2 7 1 1 4 13 4 10 9 5 5 3 7 1 1 2 6 5 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,442 1,351 1,336 1,311 1,240 1,240 1,240 1,213 1,200 1,132 1,127 1,092 1,057 1,051 1,026 970 939 932 932 928 905 883 869 852 843 824 807 794 793 772 762 758 741 741 739 729	122 97 102 156 78 124 86 75 69 68 170 105 55 165 68 68 91 75 72 76 79 117 56 54 195 58 69 69 69 195 59 195 195 195 195 195 195 195 195	2,250 1,940 1,980 1,990 1,940 1,870 1,720 1,730 1,620 1,600 1,550 1,540 1,490 1,490 1,380 1,320 1,320 1,320 1,320 1,320 1,320 1,180 1,180 1,170 1,140 1,170 1,100 1,140 1,170 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070 1,080 1,070			

SURVEY OF TRANSPORTATION

Route	Highway section	Mileage of State highway	Average daily motor vehicles	Average daily trucks	Average daily motor vehicles-1930
140	Georgetown—Russellville Lancaster—Amanda N. Pickaway Co. line—W. Pickaway Co. line. Jackson—Oak Hill. Chillicothe—Jct. U. S. 50 & 27 Oak Hill—Jct. 75 & 140. Lower Salem—Caldwell Hillsboro—Marshall Ironton—Proctorville Jct. 125 & 132—Hamilton Co. line. McGaw—Jct. U. S. 52 & 25 Albany—Jct. 31 & U. S. 50 Berlin—Jackson. Lower Salem—Jct. U. S. 21 & 37	8 8 7 8 6 11 5 3 19 7 16 7 10 8 5 10	722 718 716 705 695 678 660 649 644 638 632 629 628 624 624 621 616	77 44 65 52 47 40 80 34 81 53 50 81 78 67 48 64	1,130 1,020 1,020 1,020 1,000 1,000 960 940 930 910 900 890 990 910 880 870
	Total. all sections	2,381			

APPENDIX VI

*(Traffic on State Highways Entering the Larger Cities as Recorded at Stations Surrounding the Cities)

CLEVELAND 1

				Total vehicles		
Route	Station	Distance from corporation line	Motor trucks, average daily density	Average daily density	Maximum daily density	
175 U. S. 20 35 U. S. 322 U. S. 422 43 8 14 U. S. 21 176 94 3. U. S. 42 252 U. S. 42	252 532 754 28 27 26 540 539 541 25 24 544 545 547 791 789 790	0 0 5.0 2.7 1.6 7.8 2.3 3.0 5.3 2.5 7.0 4.0 5.8 3.0 4.0 0.8	105 365 37 211 198 125 138 90 81 109 58 58 217 221 290 495 109	1,628 5,077 1,55 1,246 2,091 1,023 2,751 1,789 1,484 740 394 422 2,213 1,446 5,309 3,469 1,701	3,780 11,677 356 2,893 4,855 2,375 6,327 4,115 3,413 1,718 897 971 5,090 3,326 12,211 7,979 3,912	
All routes			2,907	32,938	75,895	

¹ Including E. Cleveland, Lorain and other adjacent incorporated areas.

CINCINNATI

			Total vehicles		
Route	Station	Distance from corporation line	Motor trucks, average daily density	Average daily density	Maximum daily density
U. S. 52 125 74 U. S. 50 3 U. S. 25 & U. S. 42 4 5 U. S. 27 U. S. 27 U. S. 52 U. S. 52	51 13 52 651 650 54 55 58 653 57	0.8 7.7 2.5 7.1 0 3.2 4.1 1.2 6.2 4.0	63 121 221 187 236 345 242 372 206 150 58	466 919 1,566 700 1,232 2,817 2,820 2,402 1,048 1,163 606	1,082 2,134 3,636 1,610 2,834 6,548 5,577 2,410 2,700 1,407
All routes			2,201	15,739	36,479

¹ Including certain adjacent incorporated areas.

TOLEDO

		Distance from corporation line		Total vehicles		
Route	Station		Motor trucks, average daily density	Average daily density	Maximum daily density	
02 J. S. 23 J. S. 24 & U. S. 25 J. S. 127 J. S. 20 J. S. 20 J. S. 23 & U. S. 24 77 J. S. 25	259 155 1149 803 90 799 799 91 263 92	3.0 2.4 1.0 2.0 1.2 0 0 1.0 1.0	65 232 293 378 209 476 108 107 184 202	481 2,772 3,810 3,605 1,885 2,726 942 928 2,053 2,410	1,117 6,437 8,763 8,292 4,377 6,270 2,167 2,155 4,767 5,596	
All routes			2,254	21,612	49,941	

COLUMBUS

Route	Station	Distance from corporation line		Total vehicles		
			Motor trucks, average daily density	Average daily density	Maximum daily density	
. S. 23. . S. 40. . S. 23. . S. 40.	42 41 598 40 599 218 38 216 39 219	0.5 1.0 10.5 3.8 6.2 8.0 1.0 9.5 3.5 0.1	293 125 59 137 58 . 94 129 28 172 244 89	4,381 1,733 323 2,184 1,032 1,248 1,810 189 2,019 3,290 1,123	10,173 4,024 743 5,071 2,374 2,898 4,203 439 4,688 7,639 2,608	
All routes	* * * * * * * * * * * * * * * * * * * *		1,428	19,332	44,860	

AKRON

Route	Station	Distance from corporation line	Motor trucks, average daily density	Total vehicles		
				Average daily density	Maximum daily density	
6	1051 1054 1056 1057 131 331 1058 130 133	1.7 1.5 0.2 8.2 2.0 1.0 ¹ 2.5 ¹ 1.6 3.0 ²	328 127 779 38 95 252 123 202 192	2,906 1,094 5,243 120 1,061 2,423 867 2,453 2,394	6,684 2,516 12,059 276 2,464 5,626 1,994 5,696 5,559	
All routes			2,136	18,561	42,874	

¹ From Barberton.

DAYTON

Route	St. 1*	Distance from corporation line		Total vehicles		
	Station		Motor trucks, average daily density	Average daily density	Maximum daily density	
S. 25.	47 870 104 283 875 103 284 868 857 855 869 282	2.0 1.0 1 2.7 1 1.0 1.0 4.7 7.0 5.0 8.0 9.4 2.3 2.0	153 117 226 56 382 76 112 61 38 159 200 108	1,906 885 3,490 984 3,045 1,454 1,164 1,150 320 2,250 2,203 1,121	4,426 2,036 8,104 2,285 7,004 3,376 2,703 2,645 736 5,175 5,067 2,603	
All routes	********		1,688	19,972	46,160	

¹ From Oakwood corporation line.

YOUNGSTOWN

Route	Station	Di-ta-		Total vehicles		
	Station Distance from corporation line	Motor trucks, average daily density	Average daily density	Maximum daily density		
& 19. J. S. 422. 8. 0. 64. 9. 8. 7. S. 422.	333 94 95 271 272 270 273 96 138	2.0 3.5 0.81 2.0 0.7 2.5 3.0 1.0 4.0	194 99 102 71 147 150 60 242 453	2,330 1,345 921 651 1,581 1,380 543 2,510 4,892	5.410 3,123 2,139 1,512 3,671 3,204 1,261 5,828 11,359	
All routes	• • • • • • • • • • • • • • • • • • • •		1,518	16,153	37,507	

¹ From Struthers corporation line.

² From Cuyahoga Falls.

CANTON

Route	Station	Distance from corporation line		Total vehicles		
			Motor trucks, average daily density	Average daily density	Maximum daily density	
J. S. 30. 3.3. 9. 14. J. S. 30. 3.3. 9. 19. 19. 19.	127 1045 328 1039 128 126 1041 129 327	1.0 7.5 1.1 7.0 0.3 1.3 1.0 2.5 6.5	485 117 200 154 347 202 174 337 37	5,583 1,124 2,101 1,835 3,681 1,871 1,303 2,114 438	12,964 2,585 4,879 4,220 8,547 4,344 2,997 4,909 1,017	
All routes		2.053	20,050	46,462		

SPRINGFIELD

	Station	Distance from corporation line	Motor trucks, average daily density	Total vehicles		
Route				Average daily density	Maximum daily density	
S. 40	11 476 469 12 186 187 473 474	4.3 1.0 1.0 3.0 1.0 1.8 1.0	139 49 184 96 59 30 67 13	2,244 422 1,549 2,309 844 364 656 155	5,211 971 3,563 5,361 1,960 845 1,509 356	
All routes			637	8,543	19,776	

APPENDIX VII

(Sections of the State Highway System on Which the Density of Motor Truck Traffic in 1925 was 200 or More Per Day)

TTC.4			Average daily trucks			
Highway section	Route No.	Miles	1925	1930 (Estimated)	1935 (Estimated)	
Massillon—Canton. Cincinnati—Newtown. St. Clairsville—Bridgeport. Akron—Canton. Ashland—Jct. U. S. 30 & 60 Toledo—Maumee. Inland—Massillon. Toledo—Sylvania. Canton—Louisville. Bellaire—2 mi. from Bellaire. Lorain—Elyria. Niles—Youngstown. Cleveland—Painesville Portsmouth—Franklin Furnace Cuyahoga Falls—Ravenna Perrysburg—Toledo Sharonville—Cincinnati. Warren—Niles. Cleveland—Elyria. Dayton—West Alexandria. Milford—Jct. U. S. 50 & 131 Néw Philadelphia—Uhrichsville Toledo—Jct. 183 & 246 Warren—Jct. 169 Bridgeport—Bellaire Canton—Jct. 8 & 80 Jct. U. S. 20 & 183—Jct. 246 & 183 Jct. 73 & 239—Jct. U. S. 52 & 73 Zanesville—Jct. 10 & 75 Hamilton—Cincinnati. Dinsted Falls—Jct. 2 & 252 Barberton—Doylestown. Mansfield—Jct. U. S. 30 & 39 Dayton—Hamiltonf Poledo—Delta Lleveland—Akron. Mingo Junction—Steubenville Hudson—Jct. 91 & 36. Lucas—Jct. 91 & 36. Lucas—Jct. 18 & 44. Canton—Jct. 18 & 44. Canton—Jct. 18 & 44. Canton—Jct. 17 & 43. Cleveland—Jct. 18 & 64. Canton—Jct. 17 & 43. Cleveland—Jct. 85 & 175.	U. S. 30 74 U. S. 40 8 60 U. S. 24 241 U. S. 127 19 147 57 U. S. 422 U. S. 20 U. S. 25 U. S. 25-U. S. 42 169 U. S. 20 11 U. S. 50 16 246 U. S. 422 7 8 183 73 10 4 252 36 U. S. 30 4-73 U. S. 25 2 8 7 91 39 U. S. 25 18 5 18 U. S. 25 18 5 18 U. S. 25 18 5 18 18 18 18 18 18 18 18 18 18 18 18 18	5 2 8 17 7 2 8 5 4 4 2 3 3 5 9 10 11 1 4 4 4 2 2 6 6 15 5 1 7 1 4 4 10 1 4 4 2 2 5 5 4 4 2 5 5 6 6 3 3 4 4 4 2 5 5 6 6 3 3 4 4 4 2 5 6 6 3 3 4 4 4 2 5 6 6 3 3 4 4 4 2 5 6 6 6 3 3 4 4 4 2 5 6 6 6 3 3 4 4 4 2 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	485 451 431 388 382 378 370 355 347 340 338 334 324 300 297 293 288 285 283 279 274 263 262 257 253 232 228 228 226 221 218 211 209 207 206 202 202 201 200 200 200 200 200	780 660 650 670 560 600 610 570 560 600 520 520 550 540 470 410 420 470 450 440 440 390 360 360 360 360 360 330 340 340 350 320 340 350 320 350 320 330 300 300 300 300 300 300 300 30	1,000 850 840 860 720 770 800 720 720 660 660 690 600 650 530 540 600 550 580 520 500 470 460 440 440 440 440 440 440 420 420 430 410 410 410 410 410 410 410 410 410 420 420 430 420 430 420 430 420 430 420 430 420 430 420 430 420 430 430 410 410 430 420 430 430 430 410 430 420 430 430 430 430 430 430 430 430 430 43	

APPENDIX VIII

(Sections of the State Highway System on Which the Density of Motor Traffic in 1925 was Between 150 and 200 Per Day)

			Average daily trucks			
Highway section	Route No.	Miles	1925	1930 (Estimated)	1935 (Estimated)	
Dayton—Jct. U. S. 40 & 69 Jacksonville—Chauncey. Norwalk—Bellevue. Hubbard—Youngstown. Lambridge—Jct. U. S. 21 & 146. Foledo—Jct. U. S. 20 & 263 Lustus—Navarre. Milford—Madisonville Columbus—West Jefferson. Duncan Falls—Zanesville. Foledo—Michigan line. Llyde—Fremont. Geneva—Ashtabula. Canton—Waynesburg. Elyria—Wakeman. Athens—Jct. 31 & 26 N. Columbus—Grove City. Fremont—Toledo. Cleveland—Chagrin Falls. Wilmington—Clarksville. Cincinnati—Hamilton. Cincinnati—Jct. 3 & 126. Sylvania—Jct. U. S. 20 & 263. Haydenville—Chauncey Bellevue—Clyde. Painesville—Geneva. Jct. 19 & 6—Jct. U. S. 21 & 6. Ashtabula—Conneaut. Delaware—Columbus. Jot. U. S. 322 & 45—Jct. U. S. 322 & 46. Dayton—Brandt. Harrisburg—Jct. 19 & 44. Youngstown—Jct. 164 & 7. Massilon—Navarre. Marietta—Jct. 19 & 44. Dayton—Jct. 10 & 34. Steubenville—Yellow Creek.	U. S. 20 U. S. 20 U. S. 20 U. S. 23 U. S. 322 201 19 7 U. S. 21 U. S. 21 U. S. 21 U. S. 21 U. S. 23 U. S. 23 U. S. 52	11 6 9 3 5 2 3 10 7 2 6 8 11 18 2 5 2 8 4 7 9 3 3 14 6 15 15 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	196 195 194 194 193 193 193 193 192 187 186 186 184 183 180 178 172 171 170 166 165 165 164 163 163 163 161 160 160 159 157 157 156 156 156 156 156 156 156 156 156 157 157	310 280 270 320 280 310 310 270 280 260 290 270 280 290 270 260 270 240 240 240 240 240 240 240 24	390 350 350 350 350 390 390 350 350 340 340 310 360 310 310 310 310 310 310 310 320 320 320 320 320 320 320 320 340 340 310 310 310 310 310 310 310 310 310 31	

APPENDIX IX

(Average Daily Density of Motor Truck Traffic by Capacity Classes)

TRANSPORT SURVEY STATIONS

	tion and				Loaded	and empt	y trucks8		Loaded trucks ³				
_ c	county	Direction ¹	Route ²	Total	½-1½ tons	2-2½ tons	3-4 tons	5-7½ tons	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons
Adams:	157 158	N S E W EW	136 CR 125 125 U.S. 152	1 2 23 22 8	1 2 16 15 8	2 2	5 5		1 1 13 13 3	1 1 9 9	1 1	3 3	
Allen:	1 159	N S E N S E W	115 33 33 CR CR CR 5 5	19 41 22 1 4 6 7	13 25 12 1	1	5 7 2	9 8	12 26 14 1	8 16 8 1	1	3 4 1	6 5
Ashland: Ashtabula	2 3 160	NS EW NS	60 U.S. 42 6 & 60	46 41 38	35 31 33	8 7 3	3 3 2		31 25 23	24 19 20	5 5 2	2 1 1	
Athens:	162 163 164 165 166 167 6	EW EW NSEWNSE EERS NSWNSE NSENSWNSE NSENSWNSE	U.S. 20 85 TR TR U.S. 20 U.S. 20 U.S. 20 U.S. 20 U.S. 20 U.S. 20 U.S. 20 31 31 & 26 31 & 26 31 & 26 31 & U.S. 50 U.S. 50 U.S. 50	148 54 8 59 185 150 76 71 77 183 98 62 26 44 49 3 156 178 40 105	1111 455 8 38 118 97 67 64 5 106 78 44 20 21 4 39 422 3 124 144 355 97 36 63	24 6 - 10 43 38 7 6 2 42 12 15 4 3 4 4 4	10 3 19 12 2 1 28 7 3 2 2 2 3 3 3	3 5 3 7 1	95 38 37 116 94 41 39 4 4114 57 17 17 3 3 2 34 2 88 101 23 56 21 36	70 31 5 24 74 61 36 35 3 64 43 26 13 14 3 27 29 2 70 82 20 52 19 34	16 27 24 4 3 1 30 7 9 3 2 	7 2	2 3 2 2 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Auglaize:	170 7 171	EW NS N S E W E W	U.S. 50 U.S. 50 U.S. 50 U.S.25&67 66 66 CR 119	46 146 65 68 4 9	114 48 51 4	21 13 14	2 7 4 3	4	23 81 42 44 3 6	20 61 31 33 3 5	13 8 9	1 5 3 2	2
Belmont:	173 8 9 174.	EW EW NSW EW NSW NEW	32 32 8 U.S. 40 8 U.S. 40 U.S. 40 147 147 265 CR	78 219 102 102 22 20 14 6	52 54 72 168 82 81 65 19 13 6	10 12 4 34 16 16 13 1	5 6 2 17 4 5 4	2	40 45 48 138 56 56 45 15 10 4	31 32 44 102 45 44 36 14 9 4	6 8 3 25 9 9 7 1 1	3 3 1 11 2 3 2	2
Brown: Butler:	177	EW	148 148 125	5 7 44	33	9	2		3 4 27	19	6	2	
	178	N S E	4 4 63	176 169 19	96 92 16	37 36 2	36 34 1	7 7	108 104 12	59 57 10	23 22 1	22 21 1	4 4

¹The direction of the route from the station.
2 Numbered routes are State highways. Other routes are: C.R.—County roads; T.R.—Town roads.
3 Does not include six-wheel trucks or tractor-and-trailer combinations.
4 Less than one truck per day.

					Loaded :	and empty	trucks3			Lo	aded truc	ks³	
	on and inty	Direction ¹	Route ²	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7 ½ tons	Total	1/2-1 1/2 tons	2-2 ½ tons	3-4 tons	5-7 ½ tons
Butler: 1	179	N S E W	U.S. 27 U.S. 27 130 TR	88 74 4 2	53 44 3	28 23 1	5 5	2 2 2	56 47 3	34 28 2	18 15 1	3 3	1 1 1
	180	N S E S E	35 & 43 35 43 43 80	49 12 37 61 82	38 12 26 53 67	8 5 11	3 3 4		29 7 22 38 51	22 7 15 33 42	5 5 3 7	2 2 2 2 3	1
Champaign:	: 10 182	NS N S E W	43 & 80 53 69 69 29	99 91 4 3 35	74 3 2 30	13 11 1 5	5 6 1	1	52 3 2 222	49 41 2 1	8 7 1 3	4 1	*
:	183 184 185	W NS S E W N E	29 53 29 55 55 CR	32 63 34 28 60 4	27 49 29 21 47 4	3 10 3 7 10	2 2 2 3	2	20 37 19 16 33	17 29 16 12 26 2	2 6 2 4 5	1 1 1 2	1
Clark	11	W N S E	55 55 71 TR	17 13 5 7	13 10 5 7	3			9 7 3 4	2 7 5 3 4	2 2		
	12 186 187	E W EW N S E W NS	U.S. 40 U.S. 40 U.S. 40 TO 70 TR TR TR 72	139 137 96 59 53 8 6 30	82 80 63 49 43 6 5 27	32 32 20 8 8 2	25 25 12 2 2	1	83 82 58 35 32 5 4 18	49 48 36 29 26 4 3 16	19 19 13 5 5 1	15 15 8 1 1	1
Clermont:	13 188 189 190	EW NS EW N E	125 28 U.S. 50 222 U.S. 52 U.S. 52	121 72 44 1 7	94 57 32 1 5	18 9 10	8 3 2	3	81 48 30 1 4	59 38 21 1 3 3	15 6 7	6 2 2 1 1	1 2
	14 191 192	EW NS N S	3 53 53 134 53	91 58 41 19 22	71 41 34 16 18	9 13 6 3 2	9 4 1 2	2	51 31 23 11 12	40 22 19 9	5 8 3 2 1	5 1 1	1
	16 193 194 195 196	N S E W NS EW NS EW	7 7 14 14 U.S. 30 19 45 153 U.S. 30	4 1 96 95 132 117 73 28 44	3 1 70 69 114 83 56 23 35	21 21 14 26 14 3 6	3 3 4 4 3 2 3	2 2 4	3 1 63 63 78 70 44 16 23	2 1 46 46 68 48 34 13 17	14 14 8 16 8 2 4	1 2 2 2 2 3 2 1 2	1 1 3
	17 197 198	EW N E W NS	16 CR 95 95	92 5 29 28 58	79 3 25 24 38	10 2 2 2 18	2 2 2 2 2 2	1	51 2 14 14 31	43 1 12 12 20	6 1 1 10	2 1 1 1 1	
Crawford:	18 19 20	N E W NS N	61 U.S. 30 U.S.30&61 62 CR	54 72 106 66 6	48 54 84 53 6	4 14 16 9	2 3 5 4	1 1	35 47 69 40 4 29	31 35 55 31 4 23	3 9 10 7	1 2 3 2	1 1
	21 199	NS NEWNSWNSEW	5 5 4 4 TR 62 62 7R 100	47 43 57 58 1 14 14 2 2	38 35 43 44 1 12 12 2 2	6 6 10 11 2 2	3 2 4 3 3		29 27 36 36 1 9 9	23 22 27 27 1 8 8	4 6 7	1 3 2	
Cuyahoga:	22 23 24 25	NS NS NS N	U.S. 20 U.S. 42 94 176 176	438 151 58 109 93	295 99 42 47 36	71 28 9 28 21	40 20 5 3 3	32 4 2 31 33	272 110 40 63 54	178 68 27 27 27 21	48 22 8 16 12	27 17 4 2 2	19 3 1 18 19

Station and				Loaded	and empt	y trucks8			L	oaded tru	cks8	
county	Direction ¹	Route ²	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons
Cuyahoga (cont.): 25 26 27 28 200 Darke:	E WESEWNSEWNSEW	CR CR 43 U.S. 422 91 91 U.S. 322 U.S. 322 U.S. 322 TR TR	31 47 125 144 58 198 46 74 182 209 58 55	21 28 73 84 33 114 30 41 92 104 37 35 1	5 14 32 42 11 52 11 52 17 46 52 8 7	2 3 14 11 9 21 2 9 38 44 10 10	3 2 6 7 5 11 2 7 6 9 3 3	18 27 82 89 36 122 29 47 115 133 35 33 1	12 16 42 52 20 70 19 26 58 66 22 21 1	3 8 25 26 7 32 8 11 29 33 5 4	1 2 11 7 6 13 1 6 24 28 6 6	2 1 4 4 3 7 1 4 4 6 2 2
29 30 31 201 Defiance:	EW N S E E W N S E W N S W S	29 9 TR 71 29 29 121 121 200 51	46 52 51 1 21 49 70 65 32 33 16	39 38 1 17 38 56 58 28 30	7 9 9 12 5 4 2 1	4 4 2 2 2 2	2	29 29 29 1 12 28 40 37 18 19	24 22 22 1 10 22 32 33 16 17	5 5 5 5 7 3 2 1	2 2 2 1 1 1	1
203 204 205 206	ZH\ZOH\ZON\ZOH\ZOH\ZOH\Z	15 18 18 18 18 CR CR 66 66 TR CR 111 111 TR 18 18 TR TR TR	67 110 49 28 3 26 3 11 11 4 40 25 4 2 31 29 2 2 3 3	57 96 43 22 3 21 3 2 2 2 	9 13 6 5 	1 1 1 9 9		47 77 34 18 2 17 2 5 5 9 23 15 18 17 17 20	40 67 30 14 2 14 2 1 1 7 19 13 17 16 1 1 2	6 9 4 3 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 4 4 4 1 1 1 1	
Delaware: 33 208 Erie:	W NSE SE W	193 U.S. 23 U.S. 23 TR CR 47 47	33 70 75 5 4 21 19	33 52 55 5 4 19 17	9	9 11	2 2	39 42 3 3 15 14	19 29 31 3 3 14 13	5 5	5 6	1
34 209 210 Fairfield: 35 211 212	EWSS NNEWNSENSE	2 60 13 10 10 37 37 & 10 79 79 CR 158	89 42 35 47 36 33 69 30 31 1	63 25 31 42 29 28 57 23 23 23	16 6 2 3 7 5 12 6 6	2 2 1	6 4	58 23 19 28 21 19 40 17 17	38 13 16 25 17 16 33 13 13	12 5 2 2 4 3 7 3	3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 2
Fayette: 36 214 215	SE SEWSEWNSE	158 CR CR 10 10 CR 11 11 3 3 CR	23 11 1 28 27 23 39 58 50 60 10	20 9 1 21 20 21 29 47 39 47 8	4 4 2 8 10 11 2	1 1 1 2 1 2	2 2 2	17 13 6 1 16 15 12 20 30 30 30 36 6	14 11 5 1 12 11 11 15 24 23 28 5	2 1 4 4 6 6 7 1	1 1 1 1 1 1 1 1	1 1
Franklin: 37	N S E W	31 31 TR TR	72 89 22 35	51 61 17 24	18 22 5 8	3 5 2	1	44 54 13 21	31 37 10 14	11 13 3 5	2 3	1

Station		D:			Loaded	and empt	y trucks³			Lo	aded tru	cks³	
		Direction ¹	Route ²	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons	Total	½-1½ tons	2-2½ tons	3-4 tons	5-7½ tons
Franklin (cont 3 3 4 4 4 4 21 1 21 21 21 21 21 21 21 21 21 21 21 2	8 9 0 1 1 2 6 7	NSS EW NSE SS NSS NNSW N	U.S. 23 3 U.S. 40 3 3 TR U.S. 23 104 19 CR 31	129 172 137 118 125 7 292 28 46 34 16 94	103 141 104 94 99 5 237 24 41 33 13	17 25 23 12 12 2 36 2 2	6 5 8 10 11 	3 1 2 2 3 3 1 1	70 92 76 69 73 4 155 18 28 21 10 63	52 71 56 55 58 3 121 16 25 20 8 53	12 17 16 7 7 1 23 1	4 3 3 6 6 6 10	2 1 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Fulton: 219	3	N SE E N SE	31 CR U.S. 40 TR TR U.S. 20	101 9 -244 4 2 29	86 8 178 3 2 25	38	5 1 24 .	4	67 6 142 3 1 20	57 5 101 2 1 17	23	3 3 1 16	2
221 222 Gallia:	1	WNSEWNSEW	U.S. 20 65 05 U.S. 20 U.S. 20 66 66 66 2 CR	27 6 7 9 6 33 39 81 68	24 3 4 7 5 31 34 67 55 4	1 2 5 9 8	1 2 4 4	1	19 4 5 6 4 21 23 47 40 2	17 2 3 5 3 20 20 20 39 32	2 1 2 1 1 3 5 5	1	1
Geauga:	5	N S W NS	160 11 11 7	31 66 37 92	31 58 31 85	2 1 5	2	6 5	20 43 24 58	2 20 38 20 54	1 1 3	1	4 3
223 224 Greene:	3	ENSEWNSEW	85 CR CR 87 87 CR CR U.S. 322 U.S. 322	33 4 5 20 29 56 6 84 68	26 4 3 8 14 37 6 48 31	4 2 3 5 14 23 20	3 10 5 13 17		20 2 3 12 18 41 4 61 50	14 2 2 5 9 27 4 35 23	3 1 2 3 10 17 15	3 5 6 4	
225 226	5	EW S E W EW EW	11 53 53 235 U.S. 42	153 58 50 12 74 51	108 48 42 10 67 39	33 7 6 2 5	11 3 2	1	94 31 26 6 35 31	62 26 22 5 31 24	24 4 3 1 3 5	8 1 1 1 2	
Guernsey: 49 50 227)	NS EW N S	U.S. 21 U.S. 40 U.S. 21 U.S. 21	309 120 13 19 8	266 83 13 16 6	28 14 2 2	14 16	7	165 65 6 8 4	140 45 6 7 3	17 9 1 1	8 8	3
Hamilton: 51 52 53 54		EW N E W NS	U.S. 52 CR 74 74 U.S. 50 U.S. 25	63 116 117 221 84	49 52 96 140 53	9 51 15 62 17	5 13 6 19 12	2	37 73 73 139 49	27 33 60 88 29	7 32 9 39 12	3 8 4 12 7	1
55 56 57 58 228		NS EW EW NS N S	U.S. 25 & U.S. 42 4 264 U.S. 52 9 U.S. 27 U.S. 27 TR	345 238 58 150 372 94 104	231 131 40 101 258 65 73 14	80 59 8 32 62 22 24	27 42 10 17 45 7 7	7	209 154 33 96 204 54 60 9	136 78 22 62 136 37 42 8	55 43 5 23 39 13 14	15 29 6 11 25 4 4	3 4
Hancock: 59 60 60		NSENSEW S	U.S. 25 U.S. 25 CR TR TR 15 & 17 15 & 17	103 103 2 10 5 55 48 3	74 74 2 10 5 50 43 3	15 15 	12 12 2 2 2	2 2	61 61 1 6 3 34 29 2	44 44 1 6 3 31 26 2	9 9	7 7	1 1
229 230		E W NS EW	15 15 31 12	66 65 63 111	59 58 56 97	5 4 4 8	2 2 1 4	1 2 2	40 39 33 62	36 35 29 55	3 2 2 4	1 1 1 2	1 1 1

Stati	ion and				Loaded	and empt	y trucks8			Lo	aded truc	ks³	
	ounty	Direction ¹	Route ²	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons	Total	½-1½ tons	2-2 ½ tons	3-4 tons	5-7½ tons
Hardin:	62 231 232	N S E E N S E W	31 CR 31 53 69 CR U.S. 30 U.S. 30	50 19 31 21 47 17 55 61	42 16 26 18 39 14 43 50	7 3 5 3 7 3 9 8	11		30 12 19 13 30 11 35 39	25 10 16 11 25 9 27 32	4 2 3 2 4 2 6 5	11	
	63 233	N S W NS	35 35 & 6 6 35	20 91 71 21	16 70 55 17	15 12 3	2 6 4 1		10 44 35 12	8 34 27 10	1 7 6 2	1 3 2	
Henry:	64 64 234 235	NSENSEWNSEW	33 33 TR 18 & 65 65 18 TR 33 33 TR	46 45 1 6 11 23 12 67 66	41 40 1 6 8 19 10 50 49	5 5 3 4 2 11 11	3 3	3 3	30 29 1 3 6 13 7 42 41	27 26 1 3 4 11 6 31 30	3 3 2 2 2 1 7 7	2 2	2 2
Highland:	65 66 236 237	NS NN EWN SEWN EWN EW	38 TR U.S. 50 U.S. 50 41 41 124 CR CR CR 28	1 36 1 45 44 15 13 15 5 3 7	1 29 1 38 37 10 10 11 3 2 7	6 5 5 5 2 4 2 1	1 2 2 1		24 1 29 28 9 8 9 3 2 4 5	1 20 1 25 24 6 6 7 2	3 3 3 3 1 1 2 1 1 1 1 1 1 1	1 1 1	
Hocking:	238 239 240	NS NS N E W	31 75 31 31 180	86 35 56 76 32	65 24 43 60 27	15 7 9 13 5	6 2 4 3	2	46 16 31 42 18	35 11 24 33 15	8 3 5 7 3	3 1 2 2	i
Holmes: Huron:	67 241	EW EW	19 & 39 39	52 16	45 14	5 2	2		33	29	3 1	1	
Jackson:	68 69 242 243 244 244	N S WW N S E WN S E WN S E W	6 & 13 6 & 13 TR U.S. 20 18 & 60 60 18 CR 13 13 17 17 17 4 4 18&U.S.20 18&U.S.20	68 48 20 100 12 23 25 10 35 25 11 39 31 48 171 188	60 42 18 72 12 22 24 10 30 22 11 36 25 38 118 132	5 3 2 13 1 3 3 3 3 2 3 6 27 27	1 1 2 1 3 4 18 21	3 8 8	45 32 13 69 8 16 17 7 21 15 7 24 19 30 107 118	40 28 12 48 8 15 16 7 18 13 7 22 15 24 74 83	3 2 1 9 1 2 2 2 1 2 4 17 17	2 2 9 1 1 1 1 2 2	3 5 5 5
Jefferson:	70 245 246 247	EW EW NS NS	124 124 75 75	48 43 33 15	41 41 28 13	3 2	1 1	1 1	26 20 18 9	22 20 16 8	3 2 1	1	
	71 72 248 249	EW NEW NEW NSE	151 43 43&U.S.22 U.S. 22 213 152 & 213 152 6 6 150	85 46 119 75 19 23 16 51 52 7	61 36 93 59 16 20 16 37 38	17 6 18 11 2 2	7 3 6 5 1 1	1 2	55 30 77 49 11 14 9 29 29	38 23 60 39 12 9 12 21 21	12 4 12 7 1 1 7	5 2 4 3 1 1	1 1
Knox:	73 250 251	NS NS NS	3 3 CR	38 101 20	28 84 16	7 9 4	3 5	3	23 52 11	17 44 8	4 5 3	2 2	i

Statio	n and	D			Loaded	and empty	y trucks3			Lo	aded truc	ks³	
	nty	Direction ¹	Route ²	Total	½-1½ tons	2-2½ tons	3–4 tons	5-7½ tons	Total	½-1½ tons	2-2 ½ tons	3-4 tons	5-7 ½ tons
2	74 75 76 252 253	NS N E W EW EW NS	44 CR 84 84 U.S. 20 175 86	34 40 76 78 413 105 76	26 31 49 52 264 79 68	7 6 17 18 88 16 5	1 3 8 6 44 7 3	2 2 17 3	20 25 48 49 278 68 44	14 19 31 33 171 52 39	5 4 11 11 63 10 3	1 2 5 4 32 4 2	1 1 12 2
Lawrence:	77 78	N S E N E	U.S. 52 U.S. 52 TR 75 141 75	77 78 19 26 73 95	68 70 19 22 65 84	7 5 2 6 8	2 3 2 2 3 3		33 33 8 14 38 50	29 30 8 12 34 44	3 2	1 1 1 1 2	
	79 80 81 254	EW NS NS N E	16 13 13 CR 16 16	155 105 127 36 102 112	131 87 112 27 79 84	17 13 12 5 12	7 5 3 4 11 14		92 63 72 23 65 71	76 52 62 17 50 53	11 8 9 3 8	5 3 1 3 7	
2	82 82 255 256	NSENSENSEW	32 32 TR CR 68 69 69 69 68 68	79 79 2 10 21 11 2 5 13	68 68 2 8 19 9 2 5 12 7	7 7 2 2 2 2 2 1 3	4 4		46 46 1 5 11 6 1 3 9	40 40 1 4 10 5 1 3 8 5	4 4 1 1 1	2 2	
	83 84 85 86 87 88 88 257	ENSSSW NSSEW NSEW NSEW	18 58 U.S. 20 57 2 CR CR 82 82 CR CR CR 59	58 65 265 82 211 177 28 31 34 27 12 19 89	47 48 188 65 154 109 21 25 28 20 10 17 63 62	7 12 40 9 40 39 5 5 6 7 2 2 21	3 4 30 5 14 17 2 1	1 1 7 3 3 12	42 43 181 48 127 117 17 19 21 16 7 12 55	34 31 124 38 93 69 13 15 17 12 6 11 39 38	5 9 29 7 24 29 3 3 4 4 1 1 13	2 3 23 2 8 11 1 1 	1 2 8
	90 91 92 93 93 9259	NSWSEWNSENSEWSEW	U.S. 24 U.S. 24 T.R. TR 2 U.S. 23 & U.S. 24 U.S. 25 U.S. 127 CR TR 2 2 183 183 CR	122 113 11 51 209 186 103 191 243 41 28 74 65 54 66 206	109 100 11 34 151 136 82 144 185 32 24 58 54 49 55 173	11 11 	2 2 2	2 2 2 2 2 3 5 4	76 70 7 29 119 106 53 113 156 23 16 42 37 29 36 111	68 62 7 19 86 78 42 84 115 13 14 33 31 26 30 93	7 7 7 16 31 3 1 5 4 3 5 13	1 1 1 13 10 3 10 7 2 1 1 4 2	1 1 1 3 3 3
Madison:	261 262 263	NSEWNSEWSEWS	CR 263 U.S. 20 263 U.S. 20 64 2 2 & 64 177	166 163 45 236 130 21 227 228 169	140 109 32 142 73 21 143 145 123	18 39 9 59 30 34 34 23	8 13 4 30 24 45 44 18	5 3 5 5 5	89 88 24 128 70 13 140 140 91	75 59 17 77 39 13 88 89 67	10 21 5. 32 16 21 21 14	4 7 2 16 13 28 27 8	3 2
Mahoning:	264 265 266	N S E W NS NS	38 38 U.S. 40 U.S. 40 56 38	25 30 53 50 24 49	21 25 30 27 17 37	4 5 16 16 6 9	7 7 1 2	1	14 17 30 28 14 28	12 14 17 15 10 22	2 3 9 9 3 5	4 4 1	1
· ·	94	N S E	CR CR U.S. 422	11 7 105	7 5 79	1 2 14	9	3	7 4 62	4 3 47	1 1 8	5	1 2

Stati	on and	D.			Loaded	and empt	y trucks³			Lo	paded tru	cks³	
	unty	Direction ¹	Route ²	Total	1/2-1 1/2 tons	2-2 ½ tons	3-4 tons	5-7½ tons	Total	½-1½ tons	2-2 ½ tons	3-4 tons	5-7½ tons
	(cont.): 94 95 96 267 268 269 270 271 272	WWW ESEWNSW NSEWNNSEWNSE	U.S. 422 18 18 18 18 18 18 19 7 7 17 17 17 90 164 164 17 17 46 46 19	99 102 242 21 83 70 26 66 150 116 63 71 147 125 84 42 54 108	77 75 170 111 49 44 23 53 94 79 46 15 38 96 86 48 29 38 72 38	13 22 38 6 17 12 2 9 27 25 7 9 19 33 22 26 8 6	8 4 32 4 16 13 1 3 27 12 8 39 13 15 15 10 3 7 13 7	1 1 2 1 1 2 2 2 1 3 2	59 67 148 13 52 44 16 40 89 69 37 40 86 73 49 25 30 60 33	46 50 99 7 31 28 13 31 56 47 27 9 22 50 28 17 21 40 21	8 14 25 4 11 7 2 6 16 15 4 5 11 19 13 15 5 3 10 6	5 2 2 2 10 8 1 2 16 7 5 23 6 9 9 6 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	97	N S W N E W	4 4&U.S.23 U.S. 23 CR U.S. 30 U.S. 30	97 152 65 8 44 52	78 120 48 34 32	15 27 13	4 5 4 6 1	2	52 81 35 5 26 31	42 64 26 20 19	8 14 7 5 5	2 3 2 4 1 6	1 1
	27 4 275	N E W N S	57 17 17 U.S. 42 U.S. 42 CR	15 53 40 42 40 2	9 40 33 35 34 2	2 4 2 5 4	4 7 3 2 2	2 2	8 30 23 24 23 1	5 23 19 20 20	1 2 1 3 2	2 4 2 1 1	1 1
Meigs:	99 276	NS S E W	31 143 124 124	56 36 47 59	43 34 41 51	9 6 6	4 2 2		32 18 24 29	24 17 21 25	6 3 3	2 1	
	100 277	S E W NS	TR 32 32 9	41 41 34	33 33 29	3 3 5	2 2	3 3	26 26 22	21 21 19	2 2 3	1 1	2 2
	101 278 279	NS NS S E W	U.S. 25 U.S. 25 202 70 70	143 150 4 34 38	106 112 2 30 32	18 24 2 2	19 13 2 2 4	1	86 82 2 17	63 59 1 15	11 14 1	12 8 1	1
	280	N S W EW	8 8 26 78	22 9 15 14	22 9 15 8	6	*		13 5 9 7	16 13 5 9 4	3	2	
	y: 102 103 104 282 283	W ENGEWSW NENGENGE	11 51 51 CR CR U.S. 25 4 4 4 TR 48&U.S.40 48 U.S. 40	138 80 76 10 6 225 108 56 149 93 108 112 20	106 52 52 2 6 156 84 47 116 70 96 100 18	22 22 18 8 39 16 9 31 21 5	27 7 22 5 6	13 12 1	82 48 46 6 4 127 58 29 78 48 61 63 11	60 31 31 1 4 79 43 24 61 36 54 56	16 13 11 5 27 10 5 16 11 3 3	19 4 11 13 3	2 1
Morrow:	285 286 287	EW NS EW	37 78 37	38 15 10	30 15 8	5	1	2	11 9 5	10 9 4	1	1	
	288		U.S.30&61 U.S.30&61 CR U.S. 42 CR U.S. 42	57 53 6 54 18 36	38 37 2 47 15 31	10 12 4 4 1 3	9 4 3 2 2		32 30 3 32 11 21	21 21 1 28 9 18	6 7 2 2 1 2	5 2 2 1 1	
	106 107 108 289	NS EW NS NW	77 U.S. 40 10 & 75 75	60 86 226 32	46 71 195 28	12 10 24 3	2 5 7 1		36 54 122 19	28 45 103 16	7 6 15 2	1 3 4 1	

					Loaded	and empt	y trucks8			L	oaded tiu	cks³	
	tion and ounty	Direction ¹	Route ²	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons	Total	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons
Muskingui	m (cont.): 290 291	EW NS	U.S. 40	132 186	105 131	22 24	3 30	2	80 96	6 6 69	11 13	2 14	1
Ottawa:	292	NS	78	43	38	3	2		22	20	1	1	
	293	N E W EW	TR 2 & 163 2 & 163 163	1 90 91 120	1 75 76 103	14 14 12	1 1 1 4	1	1 51 52 70	1 42 43 60	8 8 7	1 1 2	1
Paulding:	295	N	9	1.8	16	2 2			9	8	1		
	296	N SEW N SE	U.S. 24 U.S. 24 TR TR TR 113	15 5 4 4 32	13 5	* * * * * * * * * * * * * * * * * * * *			8 3	7 3	1		
Perry:	297	N SE W N SE W	113 49 49 114 114	32 5 5 2 2	29 5 5 2 2	3 3			21 3 3 1 1 1	19 3 3 1 1	2		
	298 299	NS N S E W	13 75 13 37 13, 37&75	65 43 36 3 58	51 34 31 3 48	9 6 5.	5 3		42 24 20 2 33	33 19 17 2 27	5 3 3	4 2 2	
Pickaway:	300 301	N E W NS	56 56 & 10 10 56	23 73 52 47	19 54 37 44	2 10 8 3	2 6 4	3 3	12 38 27 27	10 28 19 26	1 5 4 1	1 3 2	2 2
Pike:	302	N E W	112 124 124 & 112	11 62 71	9 54 62	2 6 7	2 2		6 33 38	5 29 33	1 3 4	1 1	
Portage:	109 110 303	Nsewer ENSe	CR CR 18 18 36 44 44 82	3 9 71 75 174 36 80 43	3 9 53 56 122 20 54 31	13 14 32 10 19	5 5 16 6 6	4	2 5 43 45 113 24 52 28	2 5 32 34 76 13 35 20	8 8 22 7 12 6	3 3 12 4 4 2 8	3
	304 305 306	NSEWNSEWNS	82 88 88 CR TR 44 44 44	73 40 43 2 3 72 40 43	46 26 29 2 3 49 28 31	15 5 5 12 5 6	9 4 3	2 3 3	48 26 28 1 2 47 26 28	30 17 19 1 2 31 18 20	10 3 3 3 8 8 3 4	6 6 3 2	2 2 2 2
	307	NS NN SEWN SEWN SEW	TR TR 225 80 17 17 & 80	4 1 2 6 47 49	4 1 2 4 31 33	12	2 4 3		3 1 1 3 26 27	3 1 1 2 17 18	7 7	1 2 2	
	111 308 309	NS EW N S E W	9 11 9 9 U.S. 40 U.S. 40	34 82 18 16 7 5	28 55 17 15 5	3 17 1 1	3 9	1	20 48 11 10 4 3	16 32 10 9 3	10 1 1	2 6 1 2	
Putnam:	310		66 CR 17 & 66	4 3 9	4 3 9				3 2 6	3 2 6			
	311	NSEWNSEWNSE	17 115 15 & 115 TR	6 5 8 1	6 5 6	2			4 3 5 1 3	4 3 4	1		
	312	N S E W	15 33 33 CR CR	38 38 1 1	32 33	1 3 3 1	3 2		26 26 1 1	22 23 1	1 2 2 1	2 1	
	112 113 313 314	NS NS NS S	13 5&U.S.42 U.S. 42 TR	47 104 197 16	38 82 173 16	8 15 15	1 6 7	1 2	27 64 104 9	22 48 89 9	11 10	1 4 4	1 1

Cto	dan and				Loaded	and empt	y trucks3			Lo	paded true	ks³	
	tion and ounty	Direction ¹	Route ²	Total	½-1½ tons	2-2½ tons	3-4 tons	5-7½ tons	Total	½-1½ tons	2-2½ tons	3-4 tons	5-7½ tons
Richland	(cont.): 314	E	39 39	204 216	153 165	27 26	20 21	4 4	109	82 89	14 14	11 11	2 2
Ross:	315	N\$	39	116	87	16	13	*	116 62	46	9	7	
	114	Noesewsew	U.S. 23 U.S. 23	46 69	27 44	16 21	3 4		26 39	15 25	12	2 2	
	115	SE	159 11 U.S. 50	25 46 22	19 36 19	6 10 3			14 26 12	11 20 10	3 6 2		
	116	W S	11&U.S.50 U.S. 50	29	55 22	13 6	1		38 16	31 12	2 7 3	1	
	117	WN	U.S. 50 28 104	34 5 54	25 4 37	7 1 13	2		19 3 26	14 2 18	4 1 6	1 2 3	
	316	N S W	11 11	97 43	63 26	26 13	6 2	2 2	46 20	30 12	12	1	1 1
Sandusky		NS EW	U.S. 23 U.S. 20	71 186	135	9 26	3 16	9	37 108	30 75	5 17	2	7
	119	S E W N S	12 12	52 61	41 50	8 8	3 3		34 40	27 33	5 5	2 2	
	317	N S	CR 101 101	15 76 76	13 61 60	2 7 7	7 7	1 2	10 43 43	9 34 34	1 4 4	4 4	1 1
	318	W N	34 CR CR	8 6 12	8 6 9		2		4	4			
		N S E W	12 12	12 10	10	1 2	2		3 7 7 6	3 5 6 5	1	<u>1</u>	
	319 320	I NS	53 102 U.S. 20	94 100 133	80 62 85	11 23 26	3 10	5	56 61	48 38 52	6 14 16	1 2 6 9	3
	321	N E W N E	U.S. 20 CR	88 61	53 35	21 16	15 12 8	7 2 2	81 53 37	32 21	13 10	7	1 1
Scioto:		E W	34 34	37 54	27 35	7 12	3 5	2	22 32	16 21	4 7	5 2 3	1
	120 121	NS N	U.S. 52	116 117	93 95	16 18	5 2	2 2	58 60	44 49	10 9	3 1 5	1 1
	122	W NS	73&U.S.52 U.S. 52 U.S. 23	228 111 100	155 65 81	38 20 15	10 6 4	25 20	116 56 54	79 33	19 10 9	5 3 2	13 10
Seneca:	322	NS	139	78	63	7	4	4	46	43 37	4	3	2
	123	N E W	18 17 & 18 17	73 77 10	50 54 10	8 9	9	6 5	42 44 6	29 31 6	5 5	5 5	3
	124 323	NS N S E	53 U.S. 23	85 13	71 11	7	5 1	2	48 10	39 8	5 1	3 1	1
		l W	U.S. 23 17 17	10 5 4	9 5 4	1			7 4 3	6 4 3	1		
Shelby:	324 125	EW	18 U.S. 25	42 54	30 39	4	4	4	27	19	3 7	3	2
	325	SE	54 CR	9 23	8 19	11 1 4	4		30 6 16	21 5 13	1 3	2	
Stark:	326	W NS	U.S. 25	32 99	27 73	5 18	8		22 54	19 39	3 11	4	• • • • • • •
	126 127	EW	U.S. 30 U.S. 30	202 485	149 344	30 92	21 41	2 8 7	112 294	82 205	17 61	12 23	1 5
	128 129 327	EW NS N	44 8 U.S. 21	347 337 143	246 204 113	59 44 21	35 85	4	226 184 80	157 111	42 26 12	22 45	5 5 2 2 3
		N S E NS	19&U.S.21 19	168 37	131 28	24 5	5 8 2	4 5 2	94 21	63 73 16	13 3	3 5 1	3
	328 329 330	NS NS NS	43 80 241	200 84 142	144 72 98	36 10 26	14 2 11	6 7	110 46 81	73 39 54	22 6 15	10 1 7	1 5 5
Summit:	130 131	EW	18	202	139	39	15	9	128	86	27	10	5 5 4
	131	N S SE	93 93 TR	95 80 25	64 60 15	12 11	11 7 5	8 2 5	53 45 14	36 34 8	7	6 4 3	4 1 3
	132	SE E NW	CR TR	8	8				213	4			
	13 3 134	NS NS	8 14	322 186 90	220 95 49	63 41 25	25 30 10	14 20 6	213 120 62	139 58 30	46 27 19	18 21 8	10 14 5 1
	331	NS NS NS NS EW	93 TR CR TR 8 8 14 U.S. 21 U.S. 21	61 72	37 50	13 17	9 5	2	33 39	20 27	19 7 9	21 8 5 3	
		w	36 36	252 185	183 141	40 27	24 13	5 4	138 101	100 77	22 15	13 7	3 2

Stot	tion and				Loaded	and empt	y trucks³			Lo	aded true	ks³	
	ounty	Direction ¹	Route ²	Total	½-1½ tons	2-2½ tons	3-4 tons	5-7½ tons	Tota1	1/2-1 1/2 tons	2-2½ tons	3-4 tons	5-7½ tons
Trumbull:	135 136	SW N E	82 82 82 & 36	112 23 122	97 18 92	10 3 18	3 2 10	2	64 15 81	55 12 61	6 2 12	2 1 7	1
	137 138	NS NS N S	36 169 U.S. 422 U.S. 422 169	103 285 257 451 215	77 193 161 294 144	15 64 52 93 49	9 24 37 55 19	2 4 7 9 3	68 185 163 286 136	51 123 102 186 91	10 42 33 59 31	6 17 24 35 12	1 3 4 6 2
	332	N S F	7 7 & 36 36	35 39 4	26 30 4	5 5	3 3	1	22 25 3	16 19 3	3 3	2 2	1 1
	333 334	EW N S E W	7 & 19 46 46	194 3 38	138 3 33	36 3	16	4	108 2 24	76 2 21	20	9	3
	334 335	E W N S E	36 36 46 46 CR	108 75 31 34 13	88 59 25 29 10	12 9 4 3 3	6 5 2 1	2 2	69 48 22 24 9	56 38 18 20 7	8 6 3 2 2	3 1 1	1 1
	336 337	NS N S E W	CR 45 U.S. 422 U.S. 422 CR CR	16 41 115 127 6 22	14 36 64 76 3	2 4 29 28 2 5	1 18 19 1 4	4 4	11 25 68 75 4	10 22 38 45 2 8	1 2 17 17 17	1 11 11 1 2	2 2
Tuscarawa	139 140	NS N S E	6 & 8 6 & U.S.21 6 & U.S.21 TR	263 178 172 28	170 124 124 24	60 41 37 4	12 10 8	21 3 3	150 106 103 17	98 74 74 15	34 24 22 2	7 6 5	11 2 2
	141 338 339	EW N E W NS	16 CR 39 39 U.S. 21	264 47 169 126 66	217 35 128 97 46	34 12 36 25 18	10 4 2 1	3 1 2 1	142 24 86 64 37	115 18 65 49 25	20 6 18 13 10	6 2 1 1	1 1 1 1
Union:	142 340 340	EW N S	4 4 4	41 8 45	36 8 38	45	1 2		28 5 26	25 5 22	3	1	
	341	E W N S E W	CR 47 4 4 47 CR	43 18 33 29 4	36 17 30 28 4	4 1 3 1	2	1	24 12 22 19 3	20 11 20 18 3	2 1 2 1	1	1
Van Wert:	: 342	EW N S	32 49 CR	41 2 1	34	5	2		25	21 1 1	3	1	
	144	E W N E W	U.S. 30 U.S. 30 9 9 & 17	27 26 37 7	19 19 32 5	6 5	1 1 2 2		16 15 23 4	11 11 20 3	4 3 3 3	1 1	
	145	S E W S	9 & 17 CR U.S. 30 U.S. 30	42 19 56 53	36 19 42 39	4 5 5	1 1	8 8	26 13 37 35	22 13 28 26	3 3 3	1 1 1	5 5
	343	S E W N S E	CR 54 54 116 TR 117	15 11 18 1 24	15 11 13 1 21	5			2 9 7 11 1 14	2 9 7 8 1 12	3		
Vinton:	345	NS	116 & 117 75	17 27	13 24	1	2		10 15	8	2	1	
Warren:	346 347	NS N S E	U.S. 42 48 48 73	26 23 20 10	23 19 17 9	3 4 3 1			17 16 14 7	15 13 12 6	2 3 2 1		
Washingto	348 n: 146 147	NS NS	73 48 7 7	9 33 21 79	24 16 70	2 6 3 7	3 2 2		6 19 8 44	5 13 6 39	1 4 1 4	2 1	
	148	N S E N	7 CR U.S. 21 U.S.21&27	71 10 100 156	63 8 87 136	7 2 11 18	1 2 2		39 6 55 86	35 5 48 75	4 1 6 10	1 1	
Wayne:	349	EW	37	62 41	56 37	6 2	2		34 20	31 18	3	1 2	
	149	N E	04 U.S. 30	98 112	75 83	17 22	3 4	3	68 78	52 58	12 15	3	2 2

Ctation and				Loaded	and empt	y trucks8			Lo	aded truc	ks³	
Station and county	Direction ¹	Route ²	Total	½-1½ tons	2-2½ tons	3-4 tons	5-7½ tons	Totai	½-1½ tons	2-2½ tons	3-4 tons	5-7½ tons
Wayne (cont.) 149 150 151	W NS N E	U.S. 30 3 5 & 6 5, 6 & U.S.	100 97 53 117	72 68 38 89	22 15 5 15	12 8 11	2 2 2 2	69 64 32 71	50 46 23 54	15 10 3 9	3 7 5 7	1 1 1 1
350	W N S E	30 U.S. 30 76 & 6 76 6	68 71 11 64	53 52 11 45	10 7	12 12	1	41 40 6 36	32 29 6 25	6 4 4	2 7	1
Williams: 152 351 352 353	Nsewnsewnsew	CR CR 2 2 9 49 107 TR 9 & 15 9 & 15 CR CR	1 2 36 33 45 39 54 23 9 59 44 15 2	1 2 29 26 43 35 47 18 9 53 40 12 2	3 3 1 3 3 2 2 6 3 3 3	3 3 1 1 2 2 2 2	1 1 2 1	1 26 24 33 25 34 14 6 39 29	1 1 21 19 32 22 30 11 6 35 26 8	2 2 1 2 2 1 4 2 2	2 2 1 1 1 1	1 1 1
Wood: 153 154 155 354 355 356 357	SZGEWZGEWZGWZGEWZEWZGE	U.S. 25 CR CR U.S. 20 U.S. 20 TR 102 102 64 64 184 CR CR CR CR TR 34 34 105 34 34 TR TR TR TR	161 30 27 49 42 3 6 224 229 30 47 118 7 15 26 9 20 23 4 9	132 19 21 34 30 3 6 155 158 25 41 15 6 15 23 6 18 18 18	21 6 3 9 9 3 7 38 5 6 3 1	7 5 3 4 2 20 20 20	1 2 13 13	101 20 18 33 28 2 4 145 148 16 26 212 12 5 10 17 5 11 13 3 6 40	80 13 14 23 20 2 4 100 102 13 23 12 10 4 10 15 3 10 10 3 6 34	16 4 2 6 6 	1 1 1 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
358	W N S E W	U.S. 23 U.S. 25 U.S. 25 18 18	56 96 104 18 20	46 60 66 16 18	3 21 21	7 11 12	4 5 2 2	35 51 55 10 11	29 32 35 9	2 11 11	4 6 6	2 3 1 1
Wyandot: 156	N S E	53 53 & 67 67	15 41 26	15 36 21	5 5			9 23 15	9 20 12	3 3		

APPENDIX X

(Average Gross Weight of Loaded Motor Trucks by Capacity Classes, Tractor—Trailer Combinations, and Trailers)

TRANSPORT SURVEY WEIGHT STATIONS

			Average gros	ss weight in pounds	;1		
Station	½ to 1½ ton	2 to 2½ ton	3 to 4	5 to 7½	Loaded	Loaded trailers	attached to trucks
	loaded trucks	loaded trucks	loaded trucks	ton loaded trucks	tractor-trailer combinations	2-wheel trailers	4-wheel trailers
1 2 3	4,400 4,770 4,710	11,250 10,520 11,820	15,170 15,020				
4 5	4,370 4,360	10,660 9,630	16,820 14,840 13,530	14,540			8,300
6 7 8 9	4,870 5,070 4,880	10,780 11,870 14,040	16,700 15,740 14,080				
10 11	4,220 4,430 4,720	10,810 9,520 11,020	14,020 16,110 14,160				
12 13 14	4,900 5,100 6,360	11,730 11,490 13,180	15,640 14,960 18,010	17,280			
15 16	4,400 4,860 4,330	11,610 10,440 9,960	13,430 12,440	17,430			
17 18 19 20	4,820 4,420 3,800	11,710 11,130	14,020 14,480 15,440 12,710				8,000 12,040
21	4,580 4,700	9,550 11,220 11,420	11,390 16,830	20,190	14,600	7,330	13,850
22 23 24 25 26 27 28 29 30	4,890 4,330 4,770	12,390 11,700 11,360	16,150 16,410 17,190 17,100	21,650		5,820	11,600
26 27 28	4,880 4,830 5,110	12,770 12,480 12,430	17,100 16,310 16,110	23,110 17,870 20,080 19,570		5,070	10,130
30 31	4,920 5,120 5,230	11,200 10,630 10,300	14,490 14,690				
31 32 33 34 35	4,470 5,680 4,800	9,500 11,650 11,160	11,840 18,340 15,540	20,990			16,730
36 37	4,870 4,500 5,280	11,200 10,750 10,540	14,030			*************	10,730
38 39 40	4,640 4,410 4,680	12,500 11,930 11,670	17,320 14,620 16,100	17,820 17,180 16,340		• • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •
41 42 43	4,540 4,900 4,020	10,500 11,210 9,240	14,430 15,950			• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • •
44 45 46	4,450 4,610 4,600	9,500 10,450	10,720 13,380 15,810	22,970			17,070
47 48 49	4,730 4,940 5,950	12,710 11,090 10,030 10,780	16,310 16,180			• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •
50 51 52	4,580	13,900 14,320	14,970 14,420 15,920	20,620		• • • • • • • • • • • • • • • •	
53° 54 55	4,950 4,610 5,560	12,840 12,020 11,240	16,000 18,890 16,380 16,770	20,220 20,900 17,800	• • • • • • • • • • • • • • • • • • • •		
56 57	5,550 5,670 5,210	13,620 11,930 12,370	14,380 16.810	20,690	22,880		8,350
58 59 60	4,820 4,620 4,240	11,580 13,360 12,050	16,970 17,510	17,390		6,820	
61 62 63	4,270 4,380 4,310	11,340 11,160 10,280	11,490 13,310 11,670	21,070			
64 65 66	3,800 5,590 4,850	11,410 12,400 11,420	11,670 14,040 13,880				
67 68 69	4,430 4,640 5,550	8,990 11,530 11,800	17,920 15,970	16,000	17,380	7,220	13,880
70 71 72	4,310 4,350 4,080	9,150 11,000 10,810	13,720 13,550				

¹ Where less than 5 vehicles were weighed averages are not given.

			Avera	ge gross weight in p	poundsi		
Station	½ to 1½ ton	2 to 2½ ton	3 to 4	5 to 7½ ton	Loaded tractor-trailer	Loaded trailers a	
	loaded trucks	loaded trucks	loaded trucks	loaded trucks	combinations	2-wheel trailers	4-wheel trailer
73 74	4,660 4,420	11,260 10,680	14,980				
75 76	4,300	10,310 11,210 12,100	13,110				7,400
76 77	4,790 4,520	11,210	15,580 14,700	18,310		4,060	12,050
78	4,160	10,850	14,350				
79 80	4,490 4,800	10,330 10,940	13,720 14,520				
81	3,840	10,740	14,130				
82 83	5,040 4,880	11,330 11,430	13,110			4,550	
84	4,700	11,270	13,030				
85 86	4,970 4,280	13,090 11,320	15,740	18,290	18,190	4,990	14,930
87	4,470	12,050	14,290 16,170	16,880 18,880			10,180
88	4,660 4,100	11,370 10,570	16,650 13,280	18,880 18,280		• • • • • • • • • • • • • • •	13,020
89 89	4,100	10.570	13.280	18,280			
90	4,150 4,140	10,830 10,120	14,290 16,140	10 410	16,610	0.410	15,960
91 92	4,780	10,690	16,280	19,410 22,180		9,410 9,070	15,880
93	4,860	12,180	14,980	16,460 17,340		5,690	8,320
94 95	4,760 4,000	10,110 10,840 10,170	16,560 17,710 12,680	20,620			
96 97	4,370 5,270	10,170 10,900	12,680 15,600				
98	5,180	12,520	15,420				* * * * * * * * * * * * * * * * * * * *
99	4,490 4,190	11,560 9,910	17,250 20,710				
100 101	4,610	11,240	15,500		14,520		
102	4,830 4,830	10,930 10,930	17,620 17,620		10,220		
102 103	4,580	11,430	14.780	,			
104	4,500 5,590	11,410 11,550	16,450 17,010	18,810	18,080		
105 106	3,850	10,710	17,010				
107	4,340 4,230	11,090 11,020	12,210 12,300			• • • • • • • • • • • • • • • • • • • •	
108 109	5,010	10,880	16,290 16,720				
110	4,610 4,580	11,300 10,080	16,720 13,660	18,910			
111 112	4,690	10,400					
113	4,130 4,800	10,160	14,280 16,130				
114 115	5,210	12,400 12,210	10,130				
116	4,630 5,350	11,450 12,030	17,170				
117 118	4,660	11,270	15,180	18,900	18,060	5,780	15,500
119	4,290 4,910	10,010 11,870	14,390 17,410				
120 121	4,090	11,970	15,070	23,190			
122 123	4,320 5,100	11,620 14,950	19,170	21,380			
123	3,910	10,650	14,730 15,800				
125 126	5,030 4,890	10,730 12,130	15,800 16,910		18,000		
127	4,280	10,510	14,230	16,540			
128 129	4,760 5,620	11,060 12,550	15,600 17,960	16,920 19,620			
130	4,460	11.350	16,660	21,160			12,550
131 132	4,580 4,580	10,660 11,550	17,400 15,510	21,860 20,340			11,680
133	4,890	12,510	16,810	18,900	26,450	11,310	14,180
134 135	5,570 4,160	11,520 9,860	15,890 15,150	19,500			
136	4,440	11,450	16,010	18,610			14,460
137 138	4,200 4,310	10,460 10,680	13,500 15,710	15,880 17,930			
139	4,860	12,810	18,040	18,290			
140 141	4,910 4,380	11,340 12,410	15,670 15,730	15,340 17,500			
142	5,020	10,740					
143 144	5,720 4,240	14,050 11,080	12,680 15,430				
145	4,460	11,190	17,390	20,720			
146 147	3,930 3,980	9,670					
148	4,460	10,170	42.000	15 140			
149 150	4,810 5,080	10,300 11,440	13,020 15,030	15,140 17,730			
151	4,660	10.730	14,530	1			
152 153	4,270 5,080	12,940 12,080	15,200 16,210			7,640	9,740
154	4,100	12,220 11,660	15,080 17,750	17,940	18,740	8,220	13,920
155	4,990	11.000	17.750	17.940	18,740	0.220	14,710

APPENDIX XI

(Classification of Loaded Motor Trucks by Gross Weight Groups at Traffic Survey Weight Stations)

					Gro	ss weight g	roups—por	ınds				
Station	Less tha	in 5,000	5,000-	-10,000	10,000	-15,000	15,000	-20,000	20,000 a	and over	T	otal
,	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent
1 2 3 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 44 14 42 43 44 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71	67 65 60 227 84 207 128 96 339 110 150 108 131 44 144 172 117 161 109 76 76 73 83 151 107 111 205 205 555 555 555 555 555 555 555 555	60.4 48.1 48.8 50.9 46.4 37.5 51.15 50.0 39.5 42.0 7 52.7 52.7 52.7 53.8 55.1 57.1 50.8 33.5 57.1 50.8 33.5 51.1 50.8 53	37 49 43 152 66 74 132 81 103 117 100 130 74 101 53 42 47 422 164 46 75 127 62 92 92 92 133 135 114 134 135 135 137 138 138 139 139 149 149 159 169 169 179 189 189 189 189 189 189 189 18	33.3 36.3 340.0 38.8 41.9 37.2 28.2 33.6 34.7 39.5 38.8 30.4 27.3 39.5 31.7 39.5 34.8 31.6 32.0 36.3 25.3 31.7 39.8 34.5 41.0 37.1 40.8 35.0 8 28.8 41.4 31.7 30.0 229.1 33.4 41.6 32.2 34.4 35.0 8 34.5 41.7 30.0 37.8 38.8 41.7 30.0 37.8 38.8 41.7 30.0 37.8 38.8 41.7 30.0 37.8 38.8 41.7 30.0 37.8 38.8 41.7 30.0 37.8 38.8 41.7 30.0 37.8 38.8 41.7 30.0 37.8 38.8 41.7 30.0 38.8 41.7 39.8 31.7 39.8 31.7 39.8 31.7 39.8 31.7 39.8 31.7 39.8 31.7 39.8 31.7 39.8 31.7 39.8 31.7 39.8 31.7 31.8 31.8 31.8 32.8 33.8 33.8 33.8 33.8 33.8 33.8 33	3 17 11 15 10 52 41 15 110 24 69 61 24 56 61 24 23 18 12 18 18 25 28 18 20 21 20 28 18 20 21 21 20 28 49 49 49 49 49 49 49 49 49 49	2.7 12.6 8.9 12.1 11.7 12.0 8.0 16.7 10.9 18.2 19.5 11.3 16.2 7.0 8.9 14.8 9.0 12.2 12.1 15.1 13.7 11.6 19.6 19.9 20.3 10.6 14.4 15.3 3 13.2 11.8 10.1 11.2 15.0 12.2 13.0 14.4 15.3 13.2 11.8 10.1 11.9 2.0 4.5 15.6 17.2 8.0 14.4 16.9 14.3 19.9 14.4 11.9 2.0 4.5 15.6 17.2 8.6 17.2 8.7 18.9 14.3 19.9 14.4 11.9 22.0 13.4 16.9 14.3 19.7 18.9 14.3 19.7 18.9 14.3 19.7 18.9 11.8 12.9 13.3 14.1 13.1 13.1 13.1 13.1 22.4 8.0 16.4 8.9 22.1	3 4 8 8 15 12 20 6 6 22 2 10 27 3 3 1 9 15 3 1 16 6 10 3 5 135 46 12 2 15 13 3 24 4 24 24 24 24 24 24 4 4 2 2 5 5 4 4 4 2 2 5 5 4 11 11	2.7 3.0 6.4 3.3 3.0 2.7 3.2 3.2 4.6 71.1 4.2 9.8 9.0 9.5 4.8 22.3 3.4 10.2 6.6 6.0 11.8 9.1 15.9 4.1 2.3 3.3 9.2 6.5 4.6 11.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6	1 2 7 7 7 9 1 1 2 2 2 4 4 4 8 8 5 1 2 2 5 5 1 1 1 6 3 2 2 6 6 3 3 1 1 2 2 3 3 3 6 5 5 6 6 3 3 1 1 2 1 6 1 6 4 5 1 1 6 4 5 1 1 6 4 5 1 1 6 1 6 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.9 1.6 1.5 0.4 1.7 0.5 0.3 0.9 0.5 1.4 1.3 3.8 1.6 0.3 0.9 1.5 0.5 0.7 4.8 4.9 3.3 16.0 7.3 6.0 7.8 0.8 1.4 1.1 1.5 0.9 1.6 1.1 1.5 0.9 1.6 1.1 1.5 0.9 1.6 1.1 1.7 6.0 2.9 2.1 1.4 1.7 6.0 2.9 3.3 1.4 1.1 1.7 6.0 2.8 3.3 2.7 3.6 1.1 1.7 6.0 2.8 3.3 2.7 3.6 1.1 1.7 6.0 2.8 3.3 3.3 2.7 3.6	111 135 124 456 446 165 446 165 446 188 659 220 380 211 332 191 133 147 1,317 182 2598 372 2598 733 123 123 123 123 123 124 77 391 180 326 447 395 267 419 190 811 307 211 920 750 419 190 811 307 172 477 211 920 750 419 190 172 477 211 920 750 166 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 172 477 211 920 750 175 175 2305	100.0 100.0

(Classification of Loaded Motor Trucks by Gross Weight Groups at Traffic Survey Weight Stations)—Continued

					Gro	oss weight	groups—po	unds				
Station	Less tha	an 5,000	5,000	-10,000	10,000	-15,000	15,000	-20,000	20,000	and over	Т	otal
	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent	Trucks	Per cent
72 73 74 75 76 77 78 78 79 80 81 82 88 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 111 112 113 114 115 116 117 118 119 120 121 123 124 125 126 127 128 129 130 131 132 123 124 125 126 127 128 129 130 131 132 133 134 144 145 146 147 148 149 150 151 153 154 146 147 148 149 155 156 Potal	219 45 42 166 527 105 139 175 142 188 113 77 286 130 361 197 211 219 147 187 287 119 211 311 311 317 72 64 72 63 179 166 107 255 68 107 135 408 105 243 46 64 174 62 72 53 87 225 107 112 131 131 1437 120 328 149 97 112 53 87 225 107 112 131 131 1437 181 205 412 191 191 292 118 362 70 292 72 110 299 72 110 299 72 110 299 72 110 299 72 110 299 72 110 299 72 110 299 72 110 299 72 110 205 209 129 129 129 129 129 129 129 129 129 12	\$8.5 43.3 51.2 47.3 58.6 52.2 48.0 61.2 61.6 41.6 43.7 45.2 61.7 52.3 35.2 61.7 43.8 41.5 41.5 43.8 41.5 42.9 43.5 52.3 41.0 43.5 41.0 43.5 43.7 43.5 52.3 44.0 43.5 53.0 60.5 41.0 43.5 52.5 44.0 43.5 53.0 60.5 44.0 44.0 44.0 44.0 44.0 44.0 44.0	95 34 24 115 470 69 122 114 83 70 62 82 232 72 184 176 107 134 79 188 254 120 102 217 184 76 46 46 41 132 154 79 175 68 35 81 196 95 169 31 38 80 62 105 27 95 156 61 104 133 69 116 49 21 132 154 79 175 88 80 62 105 27 95 156 61 104 133 69 116 49 21 132 148 120 66 68 119 249 163 177 101 326 158 102 68 119 249 166 68 177 101 326 178 102 177 101 326 178 102 178 103 177 101 326 178 177 101 326 178 177 101 326 178 177 101 326 178 177 101 326 178 178 177 101 326 178 177 101 326 178 177 101 326 178 177 177 177 177 177 177 177 177 177	25.4 32.7 29.3 32.8 33.7 29.1 36.4 38.5 27.0 37.8 39.2 30.3 30.8 30.8 431.7 32.8 42.7 32.8 42.7 32.8 42.7 32.8 42.7 32.8 42.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 42.5 30.1 31.7 32.8 32.1 28.0 29.1 30.1 30.1 30.1 30.1 30.1 30.1 30.1 30	44 16 12 12 12 12 22 30 18 26 143 25 30 29 18 26 143 25 100 88 15 17 18 48 94 11 16 16 16 17 18 18 18 18 18 18 18 18 18 18	11.8 15.4 15.4 15.4 15.4 16.7 10.8 13.2 11.0 12.5 13.6 10.7 14.4,5 15.7 11.1 15.7 11.2 13.6 10.4 15.7 11.1 13.7 11.1 13.7 14.1 15.7 16.8 12.9 18.7 11.1 11.6 17.7 11.1 11.6 17.7 11.1 11.6 17.7 11.5 12.8 13.8 12.9 14.0 17.7	16 9 3 13 128 6 7 10 8 6 5 7 13 3 4 35 56 7 7 25 47 18 40 16 13 10 5 24 22 42 21 42 22 6 13 13 48 13 10 16 13 10 16 16 17 17 29 16 17 18 18 18 19 19 19 19 19 19 19 19 19 19	4.3 8.6 3.7 9.2 3.3 3.0 3.7 2.0 3.3 6.2 10.3 1.7 10.0 2.0 6.3 5.8 6.1 12.0 12.0 12.0 13.3 14.5 15.7 12.0 10.6 10.	1 1 3 5 5 5 5 5 5 5 5 6 1 2 4 2 2 4 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	374 104 82 351 1,394 180 237 335 296 307 219 164 209 560 342 423 268 427 368 427 368 427 153 113 417 403 246 645 243 246 655 243 113 113 113 113 113 114 209 115 315 315 315 316 316 316 316 316 316 316 316 316 316	100.0 100.0

APPENDIX XII

(Sections of the State Highway System on Which the Density of 3 to 7½-Ton Truck Traffic in 1925 was 15 or More Per Day)

Highway section	Route No.	Miles	Daily 3 to 7 ½-to trucks
anton-Jct. 8 & 80	8	11	70
eveland-Elyria. eveland-Chagrin Falls.	U.S. 20	6	55
	U.S. 422	4	54
	U.S. 20 U.S. 30	2	53
	74	5 2	49
	8	19	49 48
aron-Camon.	8	17	46
oledo-Maumee	U.S. 24	2	45
amilton-Cincinnatí	4	10	45
	U.S. 422	5	43
	19 4–73–U.S. 25	4 25	42
	91	5	37 36
	U.Ś. 20	8	35
	U.S.25-U.S.42	4	34
W I IHIAUCIDHIA-UNTICHSVILLE	16	7	33
ıyahoga Falls-Ravenna ungstown-Jct. 18 & 45	36	11	32
rysburg-Toledo	18	9	30
	U.S. 25	4	29
	U.S. 20–18 201	9	29
	U.S. 30	2	29 29
	9	9	29
nstead Pans-1ct. 2 or 2.52	252	í	29
Clair's ville—Bringeport	U.S. 40	8	28
rren-Niles. umbus-West Jefferson.	169	2	28
edo-Jct. 263 & U.S. 20.	U.S. 40	10	28
	263	5	28
Tia wakeman	U.S. 20	11 18	28
	U.S. 20	15	27 27 27 27 26
veianu-menina	U.S. 42	17	27
euo-svivania	U.S. 127	5	26
ingheid-Drandt	U.S. 40	12	26
mont-Toledo stmouth-Jet. U.S. 52 & 125	U.S. 20-102	28	25
ain-Elyria	U.S. 52	5	25
(16-Fremont	57	3	24
(OR=1CL, 18 & U.S. 21	U.S. 20 18	6	24
	39	3 1	24 24
14011-106, 19 (X 44	44	7	24
ledo-Delta	2	21	24
veiand-jct, U.S. 21 & 1/6	176	10	24
berton-Doylestown.	36	4	23
edo-Michigan line	177	2	23
nton-Jct. U. S. 30 & 172. nbridge-Jct. U. S. 40 & 265.	U.S. 30	4	23 23 22
	U.S. 40 U.S. 25	2	23
ievue-Civae	U.S. 20	6	22
1SON-1CL, 14 & 91	91	4	22
	U.S. 422	15	21
1t-1ct, 14 & 43	43	5	21
obard-Youngstown	7-19	3	20
nton-Jct. 17 & 43. Ring Green-Findlay.	43	14	20
Ingstown-1ct, 104 & 7	U.S. 25	18	20
ton-Waynesburg	7 43	9	20
aware-Columbus	U.S. 23	11 15	20 19
ton-west Alexandria	11	15	18
ley-Dayton	U.S. 25	35	18
ngstown-Jct. 164 & 17.	164	5	18
ta-Wauseon . field Jct. 19 & 46.	2	7	18
U. S. 322 & 174-Windsor.	19	1	18
KIII Falis-Parkman	U.S. 322	23	18
annau-jet. 0.5, 52 & 128	U.S. 422 U.S. 52	23 7	17
104 OC 17-1CL, 7 OC 104	164	7	17
18 & 80-1ct, 18 & 45	18	15	17
held-Pennsylvania line	17	12	17
reland-1 winspurg	14	6	16
reland-Aurora	43	15	16
ncan Falls-Zanesville a-Jct. 33 & 115	77	7	16
Keman-Norwalk	33	3	16
vania-1ct, U. S. 20 & 203	U.S. 20 263	11	15
	263	3 8	15
ora-Jct. 14 & 43	43	5	15 15
			13

APPENDIX XIII

				1	.925				1930			1935	
Highway section	Route No.	High- way	Average		ge daily trucks	Highway	Average		ge daily	Highway	Average	Average	Highway
		miles	daily motor vehicles	Total	3-7½-ton loaded and empty	classi-	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion ¹
Massillon-Canton Cleveland-Elyria Niles-Youngstown Perrysburg-Toledo Warren-Niles Canton-Louisville Toledo-Maumee Jet. 73 & 239-Jet. U.S. 52 & 73 Cleveland-Painesville St. Clairsville-Bridgeport Ashland-Jet. U.S. 30 & 60 Columbus-West Jefferson Akron-Canton Lorain-Elyria Cincinnati-Newton Clyde-Fremont Cuyahoga Falls-Ravenna Dayton-West Alexandria Wooster-Jet. U.S. 30 & 10 Portsmouth-Franklin Furnace Delaware-Columbus Akron-Jet. 18 & U.S. 21 Geneva-Ashtabula Bridgeport-Bellaire Toledo-Michigran line Warren-Jet. U.S. 422 & 169 Dayton-Hamilton Toledo-Sylvania Hamilton-Cincinnati Hubbard-Youngstown Norwalk-Bellevue	U.S. 30 U.S. 20 U.S. 422 U.S. 25 169 19 U.S. 24 73 U.S. 20 U.S. 40 60 U.S. 40 8 57 4 U.S. 30 U.S. 52 U.S. 23 U.S. 22 U.S. 23 U.S. 22 U.S. 23 U.S. 25 U.S. 25 U.S. 422 4-73-U.S. 25	5 6 5 4 2 2 4 2 1 9 8 7 7 0 17 7 3 2 6 1 1 1 5 5 8 2 2 4 4 2 5 5 10 3 9	5,583 5,283 3,810 3,778 3,681 3,605 3,598 3,102 3,102 3,015 2,983 3,015 2,983 2,739 2,686 2,571 2,410 2,427 2,410 2,427 2,410 2,427 2,410 2,379	485 283 334 429 293 285 347 7 378 228 324 431 382 213 299 329 329 329 329 329 329 329 329 32	49 55 43 29 28 42 45 53 28 46 24 49 24 32 18 19 24 35 26 45 22 23 24 24 24 25 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20	A A A A A A A A A A A A A A A A A A A	8,970 8,070 6,320 5,400 6,200 5,920 5,730 5,630 4,530 4,530 4,550 4,550 4,550 3,970 4,620 3,790 4,420 3,740 4,290 3,740 4,290 3,740 4,290 3,740 4,290 3,740 4,290 3,740 4,290 3,740 3,750	780 450 450 550 600 360 650 650 650 670 270 280 280 280 280 280 280 280 280 280 28	79 87 71 40 46 68 71 88 42 42 79 37 72 35 55 55 52 8 42 28 42 54 42 69 33 40 40 40 40 40 40 40 40 40 40 40 40 40	A A A A A A A A A A A A A A A A A A A	11,500 10,300 8,100 6,900 7,900 7,400 7,300 7,200 6,200 5,800 5,500 5,500 5,500 4,800 5,500 4,800 4,700 4,800 4,700 4,800 4,900 4,900 4,200	1,000 550 700 600 720 460 690 880 880 880 880 850 840 650 310 450 350 410 420 720 440 410	A A A A A A A A A A A A A A A A A A A
New Philadelphia-Uhrichsville. Harmony-Springfield. Elyria-Wakeman. Sharonville-Cincinnati.	U.S. 20 8 U.S. 40 U.S. 20 U.S. 25- U.S. 42	7 3 18 4	2,313 2,309 2,307 2,282	263 96 178 288	33 27 34	A A A A	3,440 3,540 3,520 3,340	390 150 270 420	49 41 50	A A A	4,440 4,500 4,500 4,300	500 190 350 540	A A A A
Zanesville—Jct. 10 & 75 Toledo—Jct. 183–246. Ashtabula—Conneaut. Dayton—Brandt. Springfield—Brandt. Fremont—Toledo	10-75 246 U.S. 20 201 U.S. 40	4 1 11 9 12 28	2,265 2,255 2,254 2,250 2,250 2,249	226 262 161 159 145 171	29 26 25	A A A A A	3,220 3,610 3,340 3,290 3,400 3,210	320 420 240 230 220 240	42 39 35	A A A A A	4,100 4,600 4,300 4,200 4,400 4,100	410 530 310 300 280 310	A A A A A
Dayton-North Greene Co. line Barberton-Doylestown Reynoldsburg-Columbus Bellaire-2 mi. from Bellaire Marion-Jot. 4 & U.S. 23 Cleveland-Akron Mansfield-Ashland. Canton-Jot. 17 & 432. Toledo-Michigan line Columbus-Grove City Massillon-Navarre. Cleveland-Jot. 175 & 853 Painesville-Geneva. Bellevue-Clyde. Mansfield-Jot. 39 & U.S. 30 Dover-Jot. 6 & 21:	69 36 U.S. 40 147 4–U.S. 23 8 5–42 43 177 3 U.S. 21 85 U.S. 20 U.S. 20 U.S. 30 6–21	6 4 7 2 2 19 12 14 2 5 4 2 2 15 6 2 6	2,216 2,194 2,184 2,162 2,133 2,130 2,019 2,012 2,019 2,012 2,000 1,990 1,942 1,916	196 218 137 340 152 211 122 200 184 172 156 200 163 164 218 200	23 48 20 23 27 22 29	A A A A A A A A A A A A A A A A A A A	3,460 3,840 3,400 3,320 3,730 3,160 3,380 3,290 3,150 3,290 3,030 2,820 2,900 2,850	310 380 210 520 230 370 180 320 290 270 250 300 250 240 330 300	84 32 36 41 32 44	A A A A A A A A A A A A A A A A A A A	4,400 4,900 4,440 4,200 4,800 4,100 4,300 4,100 4,200 4,000 4,100 3,900 3,900 3,600 3,700 3,700	390 490 280 660 300 470 240 410 380 340 320 390 310 300 420 390	A A A A A A A A A A A A A A A A A A A

Major traffic routes, 1,500 or more daily vehicles 1925, 1930 and 1935, Class A sections.
 Medium traffic routes, 600 to 1,500 daily vehicles 1925 and 1930, Class B sections.
 Minor traffic routes, over 600 motor vehicles in 1935 and less than 600 in 1925 and 1930, Class C sections.

 Sections of highway where the daily volume of traffic during 1925 was abnormally low due to construction, detours, condition of present improvement, or routing of traffic.
 Traffic classification for these sections is based on estimated normal traffic.

 Less than one per day.

				1	925			1	930			1935	
Highway section	Route No.	High- way	Average		ge daily trucks	Highway	Average		ge daily r trucks	Highway	Avera ge	Average	Highway
		miles	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion ¹
Dayton-Xenia	U.S. 422 19 18 U.S. 25 U.S. 20 U.S. 23 U.S. 52 U.S. 422 19 2 U.S. 40 19 3 19 2 U.S. 422 U.S. 25 U.S. 40 19 3 19 2 U.S. 40 19 3 19 2 U.S. 422 U.S. 25 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 30 U.S. 40 U.S. 21 U.S. 42 U.S. 22 U.S. 23 U.S. 20 11 183 36 U.S. 30 U.S. 30	13 18 18 18 4 4 7 9 11 1 6 5 35 23 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,906 1,896 1,882 1,871 1,868 1,835 1,836 1,836 1,836 1,816 1,810 1,807 1,797 1,795 1,762 1,761 1,762 1,761 1,762 1,761 1,762 1,763 1,698 1,698 1,665 1,660 1,613 1,590 1,581 1,569 1,581 1,569 1,581 1,569 1,581 1,569 1,581 1,569 1,581	153 101 100 202 202 171 154 4 128 129 135 143 128 129 105 120 139 110 100 112 274 106 94 4 12 12 274 106 134 22 12 12 12 12 12 12 12 12 12 12 12 12	20 23 54 24 30 30 21 21 23 21 21 21 21 21 22 29 15	A A A A A A A A A A A A A A A A A A A	2,770 2,860 2,880 3,010 3,020 2,950 3,000 2,690 2,820 2,820 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,580 2,180	150	28 36 88 39 49 49 26 24 63 38 33 34 34 21 21 21 21	A A A A A A A A A A A A A A A A A A A	3,500 3,700 3,400 3,900 3,800 3,800 3,600 3,600 3,400 3,300 3,300 3,400 3,200 3,400 3,500 3,100	280 280 180 360 340 420 240 280 220 220 220 220 220 220 220 220 22	A A A A A A A A A A A A A A A A A A A

				1	925			1	.930			1935	
Highway section	Route No.	High- way miles	Average daily motor vehicles		3-7½-ton loaded and empty	Highway classi- fica- tion ¹	Average daily motor vehicles		age daily or trucks 3-7½-ton loaded and empty	Highway classi- fica- tion ¹	Average daily motor vehicles	Average daily motor trucks	Highway classi- fica- tion ¹
Kent-Jct. 18 & 2618 Jct. U. S. 127 & 183-Jct. 263 & 1838 Portsmouth, 4 miles north of Portsmouth Loudonville-Jct., 3 & 97 Sylvania-Jct. U. S. 20 & 263 Fostoria-Arcadia² Logan-Haydenville Marysville-Jct. 31 & 161² Uhrichsville-Newcomerstown Lima-Jct. 117 & 198E Canton-Waynesburg Kenton-Jct. U. S. 30 & 195 Lancaster-Sugar Grove Doylestown-Wooster Dayton-Jct. U. S. 40 & 51 Utica-Newark Greenville-Jct. 9 & 51 Cleveland-Aurora Columbus-Jct. 16 & 47 Linnville-Hebron Ravenna-Edinburg Hamilton-Sevenmile Inland-Massillon Cincinnati-Jct. U. S. 52 & 128 Medina-Jct. 18 & 253 Shelby-Mansfield Mansfield-Jct. U. S. 30 & 61 Cleveland-Painesville Dayton-Jct. U. S. 40 & 48 St. Mary's-Moulton Sandusky-Jct. 101 & 34 Chillicothe-Jct. U. S. 23 & 159 Lima-Westminster Columbus-Canal Winchester Crooksville-Jct. 10 & 75 Coshocton-Jct. 18 & 43² Wilmington-Clarksville² Loudonville-Jct. U. S. 30 & 60 Summit Co. Line-Jct. U. S. 21 & 183 Mansfield-Lexington Jct. 164 & 17-Jct. 7 & 164 Democracy-Mt. Vernon Montpelier-Jct. 9 & 107 Newark-Jct. 31 & U. S. 50 Hebron-Reynoldsburg² Cleves-Indians line Washington, C. HJct. 3 & 238 Bellefontaine-Huntsville Lalender Selection Line-Jct. U. S. 27 & 130 Dennison-Jct. 8 & 48 Barberton-Jct. 19 & 46 Duncan Falls-Zanesville Plymouth-Shelby Waynesburg-Malvern Hamilton-Jct. U. S. 27 & 130 Dennison-Jct. 18 & 48 Barberton-Jct. 19 & 46 Duncan Falls-Zanesville Plymouth-Shelby Waynesburg-Malvern Hamilton-Jct. U. S. 27 & 130 Dennison-Jct. 18 & 58 Barberton-Jct. 19 & 46 Duncan Falls-Zanesville Plymouth-Shelby Waynesburg-Malvern Hamilton-Jct. U. S. 27 & 130 Dennison-Jct. 6 & 151 Findlay-Carey Canfield-Jct. 19 & 46 Duncan Falls-Zanesville Plymouth-Shelby Waynesburg-Malvern Hamilton-Jct. U. S. 23 Ballefontaine-Huntsville Salem-E. Palestine Elyria-Grafton Cincinnati-Hamilton² Hadeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculeville Shabeville-Ciculevi	139 3 263 12 31 16 117 43 U.S. 30 31 36 51 13 9 43 16 U.S. 40 14 9 241 U.S. 52 18 18–57 U.S. 30 175 48 32 101 U.S. 23 117 31 75 16 4 18 3 60 U.S. 21 42 164 3 107	4114336513791196711112522865873101247748846977488463770115778224411410555177744447915491082224	1,240 1,240 1,240 1,240 1,240 1,230 1,213 1,213 1,213 1,213 1,213 1,206 1,203 1,200 1,197 1,197 1,197 1,189 1,185 1,186 1,186 1,026 1,021 1,021 1,021 1,021 1,021 1,021 1,025 1,021 1,025 1,025 1,025 1,026 1,026 1,026 1,026 1,026 1,026 1,026 1,026 1,027	71 88 86 108 97 500 1113 92 370 115 116 53 88 110 74 150 68 92 110 170 146 126 126 126 126 126 126 126 126 126 12	15 20 16 15 17 17 17 29 28 18 16	ВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВ	1,870 1,870 1,870 1,940 1,940 1,950 1,730 1,750	130 120 170 140 610 220 100 170 180 80 170 110 220 100 100 110 120 100 110 120 100 110 120 12	24 32 25 25 25 25 25 24 43 41	A A A A A A A A A A A A A A A A A A A	2,400 2,400 2,400 2,500 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,300 2,200 2,200 2,300 2,200 2,200 2,200 2,200 2,200 2,200 2,200 2,200 2,100 2,100 2,100 2,100 2,000 2,000 1,900 2,000 1,900	240 240 240 160 180 340 160 270 250 100 170 140 150 220 180 800 220 180 230 240 250 180 250 180 260 270 170 230 280 200 270 180 210 210 210 210 210 210 210 210 220 230 240 240 240 250 250 250 250 250 250 270 270 270 270 270 270 270 270 270 27	A A A A A A A A A A A A A A A A A A A

				1	.925				1930			1935	
Highway section	Route No.	High- way	Average		ge daily r trucks	Highway	Average		ge daily r trucks	Highway	Average	Average	Highway
		miles	daily motor vehicles	Total	3-71-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion ¹
Anna-Sidney. Bucyrus-Jct. 4 & U.S. 23 Germantown-Jct. 4 & T.3 Arcadis-Findlay Lima-Delphos Canal Fulton-Jct. U.S. 21 & 236 Lucas-Jct. 39 & U.S. 30 Newark-Jacksontown. Chillicothe-Jct. 11 & U.S. 50 Madison-Jct. 852 Bellaire-Jct. U.S. 40 & 214 Sabina-Wilmington Rainsboro-Hillsboro Jct. 16-234-Jct. 16 & 75 S Toledo-Michigan line. Waverly-Piketon Columbus-Jct. 31 & 257 Gratis-Middletown Youngstown-Pennsylvania line Galion-Jct. U.S. 30 & 61 Bryan-Jct. 9 & 107 Zanesville-Dresden Logan-Jct. 31 & 180 Cadiz-Harrisville Yorkville-Bridgeport Marion-Jct. U.S. 30 & 47 Van Wert-Rockford² West Alexandria-Eaton Dayton-Germantown Orrville-Jct. U.S. 30 & 94 Marietta-Reno Little Sandusky-Jct. 4 & U.S. 23 Delphos-Van Wert. Jct. 18 & 44-Jct. 17 & 44 Newtown-Batavia Port Clinton-Oak Harbor Galion-Bucyrus Elyria-Jct. 59 & 60 Lisbon-East Liverpool Jct. U.S. 30 & 195-Jct. U.S. 30 & 69 Jct. 73 & 112-Jct. 73 & 239 Jct. U.S. 40 & 35-Jct. 35 & 149 Coshocton-Jct. 16 & 77 Maumee-Jct. 246 & 183 Chillicothe-Waverly Smithfield-Mingo Junction Cedarville-Xenia St. Marys-Cellina Findlay-Jct. 31 & 103 Greenville-Jct. 9 & 68 Jacksonville-Chauncey Salem-Lisbon Barberton-Western Star Mt. Vernon-Utica. Bucyrus-Jct. 17 & 4 Nies-Jct. 19 & 46 Narion-Jct. U.S. 21 & 146 Dayton-Centerville Lodi-Ashland Delaware to 3 mi. north of Delaware² Jct. U.S. 322 & 45-Jct. U.S. 322 & 46 Norwalk-Jct. 11 & 64 Norwalk-Jct. 12 & 61 Clyde, Jct. 101 & 34 Jct. U.S. 322 & 45-Jct. U.S. 322 & 46 Anderson-Ville-Vellow Creek	U.S. 25 4 4 12 U.S. 30 U.S. 30 U.S. 21 39 13 U.S. 50 16 0 U.S. 23 122 18 U.S. 30 16 0 U.S. 23 122 18 U.S. 30 118 11 4 94 7 7 U.S. 23 U.S. 30 118 11 11 4 94 7 U.S. 23 U.S. 30 118 11 11 4 94 7 U.S. 23 11 11 4 94 7 11 8 11 11 4 94 7 11 8 11 11 4 94 7 11 8 11 11 4 94 7 11 8 11 11 11 11 11 11 11 11 11 11 11 1	7 14 8 7 7 13 5 4 6 4 27 7 10 9 3 2 5 7 12 3 3 8 8 14 15 10 11 12 2 4 8 13 4 11 15 12 2 2 4 8 13 4 11 17 8 8 4 5 7 7 3 11 15 13 7 7 17 7 17 3 12 14 3 7 7 15 14 13 7 15 14 13	958 948 947 947 946 943 941 940 939 938 936 932 932 932 931 905 904 901 895 894 889 888 887 883 880 888 887 863 860 852 852 851 849 845 843 880 888 887 867 774 869 764 769 768 766 755	117 120 56 127 98 58 56 68 73 34 44 67 63 52 195 72 114 66 66 58 89 62 73 73 73 71 119 85 86 66 87 73 73 73 74 74 75 76 76 77 77 77 77 77 77 77 76 76 77 77	12	ввинивния в в в в в в в в в в в в в в в в в в в	1,390 1,420 1,450 1,350 1,500 1,450 1,350 1,450 1,340 1,320 1,310 1,490 1,320 1,310 1,290 1,280 1,380 1,260 1,380 1,260 1,380 1,260 1,380 1,260 1,380 1,260 1,380 1,150 1,180 1,280 1,280 1,280 1,180 1,280 1,280 1,280 1,180 1,280	110 70 90 60 100 110 110 90 80 120 170 170 80 180 190 190 110 210 90 90 110 210 90 110 110 110 110 110 110 11	18	ВВВВАВВВВАВВВВ ВВВАВВВВВВВВВВВВВВВВВВВ	1,800 1,800 1,900 1,800 1,900 1,800 1,800 1,700 1,800 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,700 1,500 1,500 1,700 1,500	110 130 290 130 270 200 150 120 120 120 130 220 130 150 140 90 120 130 150 150 150 150 150 150 150 15	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

(Classification of the Ohio State Highway System as Major, Medium, and Minor Traffic Routes)-Continued

				1	925			1	930			1935	
Highway section	Route No.	High- way	Average		ge daily trucks	Highway	Average		ge daily r trucks	Highway	Average	Average	Highway
		miles	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	Total	3-7½ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion ¹
Jct. 257 & 161-Jct. 31 & 161 Jet. 126 & 128-Indiana line. Jiffin-Jct. 17 & 18. Xenia-Jamestown. Van Wert-Indiana line. Marblehead-Port Clinton. Lebanon-Sharonville. Hooker-Laneaster. Crooksville-Jct. 37 & 75. Cineinnati-Ross. Mt. Gilead-3m. N. of Delaware ² . Iroonton-Jct. 75 & 141 Sugar Grove-Jct. 31 & 180 Greenville-Jct. 29 & 71 Minerva-Jct. 43 & 80 Malven-Carrollton. Lima-Jct. 33 & 115. Crown City-Eureks. Portsmouth-Scioto Furnace. Newton Falls-Jct. 36 & 80 Kent-Jct. 14 & 43 Minerva-Jct. 14 & 43 Minerva-Jct. 121 & 200 Michigan line-Jct. 22 & 66 Bryan-Jct. 19 & 15. Hillsboro-Allensburg. Somerset-New Lexington Urbana-West Liberty. Barlasville-Jct. 121. 40 & 8. Ceorgetown-Russellville. Ashland-Savannah. Milford-Madisonville. Newark-Jct. 79 & 207 ² Lancaster-Amanda. Norwalk-Fitchville. Findlay-Jct. 15, 17 & 186 Salem-Canfield. Crestline-Jct. U.S. 30 & 61 N. West Jefferson-London Bryan-Indiana line ² Fremont-Bettsville. Madisonville-Cincinnati ³ Brighton-Jct. 18, 253 Grove City-Mt. Sterling. Bucyrus-Jct. U.S. 30 & 69 Warren-Bristolville. Carey-Upper Sandusky. Jct. 18 & 58-Jct. 17 & 58 Springfield-Lisbon. Canfield-Pennsvlvania line. Jackson-Oak Hill. Jct. 18, 20 & 4-Jct. 17 & 4 Jct. U.S. 30 & 39-Hayesville ² Fremont-Bertsville. Jacksvon-Bellville. Jct. U.S. 20 & 51-Lt. 9 & 68 Lexington-Bellville. Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 4-Jct. 17 & 4 Jct. U.S. 20 & 182 Minerva-Alliance Lower Salem-Caldwell Greenville-Judiana line. Wauseon-Uniden. Fremont-Tiffin. Canfield-Jct. 17 & 80 Hillsboro-Marshall.	31-161 126 17-18 11 U.S. 30 2-163 U.S. 42 31 175 U.S. 27-126 U.S. 42 75 31 29 80 43 33 140 36 43 U.S. 30 77 121 65 U.S. 50 13 8 32 51 125 60-6 U.S. 50 13 13 8 32 51 140 13-6 15-17 19 10 13-6 15-17 19 10 13-6 15-17 19 10 13-8 15-17 19 10 11-8 15-17 19 10 11-8 15-17 19 10 11-8 15-17 19 10 11-8 15-17 19 10 11-8 15-17 19 10 11-8 15-17 19 10 11-8 11-8 11-8 11-8 11-8 11-8 11-8 1	3 7 2 10 14 11 15 3 5 10 19 2 6 1 13 4 4 10 3 10 8 9 5 9 2 2 3 12 2 8 8 8 10 5 1 1 2 1 7 6 6 3 3 10 2 10 10 10 10 10 10 10 10 10 10 10 10 10	754 754 754 7554 7550 764 7550 7748 745 7411 7411 740 7400 729 728 726 725 722 721 720 720 720 720 720 720 720 720 720 720	788 766 773 32 779 7119 822 1233 555 619 429 822 666 620 524 44 665 52 624 64 665 626 626 626 626 626 626 626 626 626	16	вання в в в в в в в в в в в в в в в в в в	1,130 1,110 1,080 1,090 1,060 1,060 1,060 1,070 1,060 1,070 1,070 1,080 1,070 1,080	100	24	ввевенняя в в в в в в в в в в в в в в в в в в	1,400 1,400 1,400 1,400 1,400 1,400 1,400 1,400 1,400 1,400 1,300 1,200 1,300 1,200 1,300 1,200 1,300 1,200 1,300 1,200 1,300 1,200 1,200 1,300 1,200 1,300 1,200 1,200 1,300 1,200 1,300 1,200 1,200 1,300 1,200 1,300 1,200 1,200 1,300	150 140 140 140 160 150 130 220 150 120 90 150 120 150 120 120 120 120 120 120 120 12	ВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВ

				1	925			1	930			1935	
Highway section	Route No.	High- way	Average		ge daily trucks	Highway	Average		ge daily r trucks	Highway	Average	Average	Highway
		miles	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion1	daily motor vehicles	daily motor trucks	classi- fica- tion ¹
Oak Harbor-Jot. 102 & 163 Ironton-Proctorville. Perrysburg-Woodville. Celina-Jot. 9 & 54 Cinoinnati-Jet. 125 & 132 Conneaut-Jot. 7 & 83 Urbana-Jet. 29 & 69 McGaw-Jet. U.S. 52 & 25 Albany-Jet. 31 & U.S. 50 Cambridge-Newcomerstown Berlin-Jackson. Lower Salem-Jet. U.S. 21 & 37² Louisville-Jet. 19 & 44 Hubbard-Jet. 7 & 82. Cortland-Niles. Jot. 17 & 13-Jet. 17 & 100 Jet. 161-Jet. U.S. 42 & 176 Cincinnati-Cleves² Bryan-Farmer. Medina-Jet. 3 & 17 Sardinia-Winchester² Circleville-Jet. US. 23 & 159² Olmsted Falls-Jet. 82 & 252² London-Sedalia. Geneva-Jet. 45 & 84 Painesville-Jet. 83 & 166 Jet. 112 & 240-Jet. 112 & 73 Aurora-Jet. 14 & 160 Jet. 17 & 58-Jet. U.S. 30 & 61-S Jet. 17 & 58-Jet. U.S. 30 Mc. Gilead-Jet. U.S. 30 Mc. Gilead-Jet. U.S. 30 Mc. Gilead-Jet. 18 & 20 Rowsburg-Jet. 5, 6 & U.S. 30 Reno-Newport. Van Wert-Jet. 9 & 144 West Milton-Tippecanoe City Mansfield-Bellville Johnstown-Jet. 16 & 19² Milford-Jet. 3 & 126 Sandusky-Jet. 18 & 20 Ravenna-Jet. 28 & 44 Orrville-Jet. 3 & 28 Salineville-Jet. 3 & 44 Orrville-Jet. 3 & 44 Orrville-Jet. 3 & 28 Salineville-Orwell² West Milton-Tippecanoe City Mansfield-Bellville Johnstown-Jet. 16 & 19² Milford-Jet. 3 & 126 Sandusky-Jet. 18 & 20 Ravenna-Jet. 28 & 44 Orrville-Jet. 3 & 28 Salineville-Orwell² Wapakoneta-Anna. Painesville-Orwell² Oryenta-Anna. Painesville-Orwell² Wapakoneta-Anna. Painesville-Orwell² Oryenta-Anna. Paine	124 U.S. 21 44 7 46 17 257 176 264 108 3 74 U.S. 23 252 38 45 86 112 43 41 61 58-89 5-6 7 9 71 13 19 126 44 94 19 32 7 U.S. 23 141 9 93 33-15 45 45 45 46 U.S. 21 36 66 U.S. 21 37 49 32 48 U.S. 322 12 11 28	9 16 14 16 12 8 11 10 8 23 5 10 3 4 9 34 11 10 8 7 7 8 14 10 3 10 5 5 24 3 9 8 8 11 11 11 9 6 4 8 7 7 5 9 23 5 7 17 18 8 8 3 2 19 9	629 629 629 628 627 625 624 621 621 616 616 611 610 609 607 606 604 599 599 597 573 573 573 573 573 573 573 573 573 57	107 81 464 464 465 464 465 464 465 465 466 466	15	BEBBBBBBBBBBBBBBBBBBCBBBCCCCCCCCCCCCCC	890 890 890 890 890 890 930 930 930 880 990 1,000 870 950 880 880 890 850 870 840 870 980 880 870 810 880 880 870 810 810 810 810 810 810 870 870 870 870 870 870 870 870 870 87	150 110 600 110 120 800 110 120 800 110 120 800 110 120 800 110 120 800 110 120 800 110 120 800 110 120 800 110 120 800 110 800 800 800 800 800 800 800 80	23	BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	1,100 1,100 1,100 1,100 1,100 1,100 1,200 1,200 1,200 1,100 1,300 1,300 1,300 1,300 1,300 1,300 1,100 1,000	190 140 80 60 140 200 50 150 130 110 80 80 110 120 110 110 120 110 110 120 110 11	BEBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

				1	1925				1930			1935	
Highway section	Route No.	High way miles	Average daily motor vehicles		3-7½-ton loaded and empty	Highway classi- fica- tion ¹	Average daily motor vehicles		age daily or trucks 3-7½-ton loaded and empty	Highway classi- fica- tion ¹	Average daily motor vehicles	Average daily motor trucks	Highway classi- fica- tion ¹
Kenton-Jet. U.S. 30 & 47. Eureka-Gallipolis Jet. U. S. 23 & 159-Jet. 180 & 159 Tiffin-Republic McConnellsville-Duncan Falls² Allensburg-Fayetteville Piqua-Covington² Xenia-Wilmington Roachester-Jet. 3 & 126 Millersburg-Berlin Bellefontaine-West Liberty Corning-Jet. 13 & 37 Minerva-Lisbon Charaghar-Jet. U.S. 20 & 263² Twinsburg-Jet. 91 & U.S. 20² Perrysburg-Jet. 110 & 64 Urbana-Jet. 29 & 38 Carrollton-Jet. 43 & 35 Owensville-Jet. U.S. 50 & 131 Canal Winchester-Hooker² Idaho-Jet. 124 & 112 Shelby-Crestline Fostoria-Jet. 18 & 17 Michigan line-Jet. U.S. 127 & 183 Cleveland-Jet. 3 & 82 McConnellsville—I mile west of Malta New Lexington-Jet. 37 & 10 Hicksville-Indiana line Barnesville-Jet. 31 & 26 Marietta-Jet. 7 & 26 Marietta-Jet. 7 & 26 Marietta-Jet. 7 & 26 Marietta-Jet. 7 & 26 Minford to 4 miles north of Portsmouth Lucasville-Jet. 31 & 68 Shawnee-Logan Jamestown-Washington C. H. Coolville-Belpre Jet. 12 & 240² Kenton-Jet. 31 & 68 Shawnee-Logan Jamestown-Washington C. H. Coolville-Belpre Jet. 107 & 49 to Jet. 34 & 49 Pomeroy-Rutland Wauseon-Jet. U.S. 20 & 33 Wellsville-Jet. U.S. 30 & 153 Jet. 121 & 200-Indiana line Pink-Jet. U.S. 52 & 125 Waterville-Lucas Co. line Pink-Jet. U.S. 50 & 166 Samantha-Hillsboro. Milford Center-Marysville Washington C. HNew Holland Bethel-Georgetown Ravenna-Garrettsville Canton-Jet. 19 & U.S. 21 Morristown-New Athens Ottawa-Jet. 33 & 115. Jet. 21 & 200-Indiana line Pink-Jet. U.S. 50 & 166 Samantha-Hillsboro. Milford Center-Marysville Canton-Jet. 19 & U.S. 21 Morristown-New Athens Ottawa-Jet. 33 & 115. Jackson-Jet. 11 & U.S. 50² Jet. 5 & 182-Jet. 5 & 262 Rugles-New London Liston-Jet. 19 & U.S. 23 & 161 Sastine-Jet. U.S. 20 & 166 Samantha-Hillsboro. Milford Center-Marysville Kalida-Jet. 6 & 114 Jet. 31 & 161-Jet. U.S. 23 & 161 Sastine-Jet. 19 & U.S. 23 & 161 Sastine-Jet. 19 & U.S. 23 & 161 Sastine-Jet. 19 & 102 Lucasville-Jet. U.S. 23 & 161 Sastine-Jet. 19 & 102 Lucasville-Jet. U.S. 20 & 166 Samantha-Hillsboro. Milford Center-Marysville Waldida-Jet. 6 & 114 Jet. 31 & 161-Jet. U.S. 23 &	7 159 18 77 U.S. 50 29 53 3 19–39 53 13 U.S. 30 U.S. 20 91 110 29 35–43 U.S. 50 31 124 61 18 183 37 18 8 8 13 26 7 7 3 38 159 139 240 31 75 11 U.S. 50 49 124 33 121 124 33 121	11 9 2 8 14 8 5 15 18 6 7 7 8 10 10 6 8 9 3 2 2 18 18 6 7 8 10 10 6 8 9 3 2 2 18 18 19 10 10 10 10 10 10 10 10 10 10	493 492 491 499 489 488 486 485 484 483 478 477 474 473 472 471 470 468 466 466 466 466 466 466 466 466 466	67 32 44 58 49 39 104 46 66 32 60 53 38 66 60 53 38 36 66 40 41 26 38 36 33 34 66 40 27 55 53 32 28 38 52 28 38 52 28 38 52 28 38 52 28 38 52 36 41 38 36 38 38 37 31 32 53 36 44 11 58 54 36 38 38 37 70 52 44 51 51 51 51 51 51 51 51 51 51 51 51 51		000000000000000000000000000000000000000	730 700 720 700 700 690 710 700 680 690 710 700 680 670 680 670 680 670 680 670 680 670 680 670 680 670 680 670 680 670 680 670 680 670 680 670 680 670 680 670 750 750 750 750 750 760 680 670 680 680 660 660 660 660 660 660 660 66	80 90 100 150 1100 100 100 100 100 100 100 1		вавесная в в в в в в в в в в в в в в в в в в в	900 900 900 900 900 900 900 900	40 110 80 80 100 100 90 80 100 90 80 120 70 130 70 120 130 70 120 120 120 120 120 120 120 12	ВВВВСВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВВ

				1	925			1	930			1935	
Highway section	Route No.	High- way	Average		ge daily	Highway			ge daily r trucks	Highway		Average	Highway
		miles	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	olassi- fica- tion ¹
McArthur-Wellston Lexington—Mt. Gilead² Newark-Hebron. Bowling Green-Waterville Eaton-Camden. Leesburg-Samanths. Cleveland—Jct. 94 & 82² Bethel—Jct. 125 & 132² Dunkirk—Jct. 31 & 103² Belle Valley—Jct. 215 & 76 Garretsville—Jct. 82 & 36 Athens-Coolville. London—Mt. Sterling Versailles—Jct. 79 & 204 Jct. 18 & 15—Jct. Co. Rd. to Mark Center. Thornville—Bomerset. Jefferson—Cortland. Millersburg—Jct. 179 & 39 London—Jct. U.S. 40 & 56 Cleves—Jct. 128 & U.S. 52 Rio Grande—Jct. 11 & 160 South Charleston to Washington C. H. Jct. 18 & 4—Jct. 55 & 4. Gillespieville—Jct. 11 & U.S. 50 Cumberland—Pleasant City Johnstown—Granville. Russellville—Decatur Jct. 17 & 49 to Jct. U.S. 20 & 49 Cadis—Jct. U.S. 22 & 152 Paulding—Jct. 9 & 114 Antwerp—Payne Bellevue—Republic. Circleville—Leistville. Lodi—Western Star² Millersburg—Jct. 19 & 76 Washington C. H.—Sabina Jet. 115 & 106—Jct. 33 & 115 Amanda—Circleville Jct. 18 & U.S. 20—Jct. 17 & 61 Loudonville—Ducas² Montpelier—Jct. 49 & 107 Toledo—Jct. 2 & 163² Rainsboro—Jct. U.S. 50 & 28 Sandusky—Jct. 13 & 178 Jct. 104 & 56—Jct. 10 & 56 Lisbon—Jct. 164 & 14 Marrysville—Delaware Andover—Jct. 7 & 83 Jct. 75 & 140—Jct. 75 & 141 Paulding—Indiana line— Quaker City—Jct. U.S. 40 & 265 Blanchester—Milford. Pomeroy—Jct. 7 & 83 Jct. 75 & 140—Jct. 75 & 60 Indiana line—Jct. U.S. 20 & 33 Richwood—Jct. 7 & 83 Plain City—Jct. 21 & 200 Savannah—Ruggles² Columbus—Jct. 19 & 161 Andover—Jct. 7 & 83 Plain City—Jct. 21 & 200 Savannah—Ruggles² Columbus—Jct. 19 & 161 Andover—Jct. 7 & 83 Plain City—Jct. 21 & 200 Savannah—Ruggles² Columbus—Jct. 12 & 200 Savannah—Ruggles² Loudon—Jct. 24 & 873 Jefferson—Jct. 84 & 873 Jefferson—Jct. 84 & 873 Jefferson—Jct. 84 & 873 Jefferson—Jct. 84 & 873 Jefferson—Jct. U.S. 40 & 202	9 38 94 125 31 215 82 U.S. 50 56 68 7 204 18 13 46 43 40.S. 50 146 47 125 44 190 47 125 44 190 151-U.S. 22 9 18 16 17 76 3 3 115 10 61 39 10 10 61 39 10 10 61 39 10 10 10 10 10 10 10 10 10 10	6 16 8 7 8 5 2 6 7 9 11 24 15 4 4 8 12 10 8 11 3 5 10 5 10 5 10 5 10 5 10 5 10 11 14 17 7 29 1 15 22 19 15 22 11 14 17 22 3 8 8 3 2 5 8 5 9 15 12 11 14 17 22 3 8 8 3 2 5 8 5 9 15 12 16 9	404 401 398 398 398 399 389 389 389 389 389 389	277 500 477 428 322 588 384 411 488 465 66 441 441 533 32 227 71 420 32 32 32 32 32 32 32 32 32 32 32 32 32		080000000000000000000000000000000000000	570 580 570 580 570 560 560 560 560 560 550 550 550 550 55	60 60 50 90 90 40 120 50 30 40 80 50		CBCCCCBBBCCCCBCCCCCCCCCCCCCCCCCCCCCCCC	700 700 700 700 700 700 700 700 700 700	50 70 100 80 50 60 50 60 60 80 120 70 70 70 70 70 70 70 70 70 7	CBCCCCBBBCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

(Classification of the Ohio State Highway System as Major, Medium, and Minor Traffic Routes)-Continued

					1925			1	1930			1935	
Highway section	Route No.	High- way	verage		ge daily r trucks	Highway			ge daily r trucks	Highway	Average	Average	Highway
		miles	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion1
Jct. 39 & 234-Jct. 19 & 39. Springfield-Jct. 69 & 70. Medina-Jct. 3 & 94. Leipsic-McComb. Berlin-Wilmot. Jct. 66 & 107-Jct. 9 & 107. Springfield-Cedarville. Lancaster-Jct. U.S. 40 & 158. Van Wert-Indiana line. Wellston-Jackson. Pennsylvania line-Jct. U.S. 322 & 46. Burton-N. Bloomfield. Marysville-Jct. 31 & 68. Waverly-Jct. 112 & 240. Jct. 128 & 126-Jct. 128 & U.S. 52. Sidney-Urbana. Piqua-Jct. 29 & 692. Brandt-Jct. U.S. 40 & 482. Upper Sandusky-Jct. 5 & 2622. Jct. 215 & 76-Jct. 76 & 78. New London-Jct. 13 & 1622. Loudonville-Jct. 179 & 39. Nelsonville-New Straitsville. Plymouth-Jct. 13 & 178. Tiffin-Upper Sandusky. Adelphi-Jct. 159 & 60. Cambridge-Jct. 76 & 209. Logan-MoArthur. Jct. 223 & U. S. 20 - Jct. 223 & 2. Zanesville-Adamsville. Newport-Jct. 7 & 245. Hamden-Jct. 11 & 160. Troy-Jct. 69 & 70. Jct. 13 & 61-Jct. 59 & 61. Jct. 58 & 175-Chardon². Indiana line-Charaghar² Baltimore-Reynoldsburg. Norwalk-Brighton² Zanesville-Jct. 7 & 25. Indiana line-Jct. 15 & 18. Bettsville-Forstoria² Lebanon-Franklin. Bellville-Mt, Vernon. Scioto Furnace-Jct. 75 & 140. Bellville-Mt, Vernon. Scioto Furnace-Jct. 75 & 140. Bellville-Jct. 3 & 97. Russellvile-Ripley. Milford Center-Jct. 55 & 29. Jct. 218 & 217-Jct. 7 & 218. Wapakoneta-Jct. 32 & 196. Jct. 151 & 6-Jct. 151 & 212. Delaware-Johnston. Maumee-Jct. U.S. 20 & 263². Crestline-Bucyrus². Jct. 218 & 217-Jct. 186 & 18. Ottawa-Jct. U.S. 24 & 65. Covington-Jct. U.S. 24 & 65. Belpre-Jct. 7 & 26. Spencerville-Jct. 9 & 117. Somerset-Jct. 10 & 37. Jct. 128 & 178 - 151 & 212. Delaware-Johnston. McClure-U.S. 24 & 65. Belpre-Jct. 7 & 26. Spencerville-Jct. 9 & 117. Somerset-Jct. 10 & 37. Jct. 128 & 178 - 151 & 212. Delaware-Johnston. McClure-U.S. 24 & 65. Belpre-Jct. 7 & 26. Spencerville-Jct. 9 & 117. Somerset-Jct. 10 & 37. Jct. 128 & 22 & 152. Findlay-Jct. U.S. 22 & 152. Findlay-Jct. U.S. 25 & 152. Findlay-Jct. U.S. 26 & 152. Findlay-Jct. U.S. 26 & 152. Findlay-Jct. U.S. 26 & 152. Findlay-Jct. U.S. 25 & 53.	39 70 3 187 19 107 72 158 17 75 U.S. 322 87 31 112 128 54 29 U.S. 40 5 76 162 39 216 178 53 180 59 209 75 223 75 7 160 61 18 18 176-146 15-249 12 123 13-95 140 97 97 97 38 4-55 218 39 4-55 218 176-146 15-249 12 123 13-95 140 97 7 U.S. 20 5 81 96 65 48 186 33 566 7 117 U.S. 20 5 81 96 65 48 186 33 566 7 117 10 U.S. 21 36 58 186 33 566 7 117 10 U.S. 21 36 55 48 33 566 7 117 10 U.S. 21 36 55 48 37 117 10 U.S. 20 55 81 96 65 48 33 566 7 117 10 U.S. 20 55 81 96 65 48 33 566 7 117 10 U.S. 20 55 81 96 65 48 33 566 7 117 10 U.S. 20 55 81 96 65 48 33 566 7 117 10 U.S. 20 55 81 96 65 48 33 566 7 117 10 U.S. 20 55 81 96 65 48 33 566 7 117 10 U.S. 21 36 565 48 33 566 7 117 10 U.S. 21 36 57 53 58 U.S. 30 193 67 53	9 12 10 11 12 14 10 15 11 19 12 14 11 19 12 14 11 19 27 12 13 13 11 14 12 14 12 13 13 17 20 23 11 14 31 17 20 21 16 17 12 17 12 14 18 18 19 11 4 12 14 18 18 19 11 4 12 14 18 18 19 11 4 18 18 19 11 4 18 18 19 11 4 18 18 19 11 4 18 18 18 19 11 4 18 18 18 19 11 4 18 18 18 19 11 4 18 18 18 19 11 4 18 18 18 19 11 4 18 18 18 19 11 4 18 18 18 18 19 11 4 18 18 18 18 18 18 18 18 18 18 18 18 18	319 316 314 311 309 308 308 307 301 299 298 297 292 290 290 290 287 286 284 283 282 281 280 276 276 276 277 270 268 268 266 266 266 266 266 266 265 266 266 266	20 27 24 51 51 52 62 23 38 27 24 44 35 52 62 62 44 35 57 28 32 22 23 32 32 32 33 36 36 37 47 48 48 49 49 40 40 40 40 40 40 40 40 40 40			470 480 470 480 440 440 440 440 440 440 430 440 44	90 50 60 40 40 40 40 40 40 40 40 40 40 40 40 40		CCCCCCCCCCCCCAAACCCCCCCCCCCCCCCCCCCCCC	600 600 600 500 550 550 550 550 550 550	90 90 120 70 80 80 80 80 80 80 80 80 80 8	CCCCCCCCCCCCA ABCBCCCCCCCCCCCCCCCCCBBCBCCCCCCCC

				925			1	.930		1935			
Highway section	Route No.	High- way	Average		ge daily trucks	Highway		Average daily motor trucks		Highway		Average	Highway
		miles	daily motor vehicles	Total	3-7½-ton loaded and empy	classi- fica- tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion1
Hillsboro-Jet. 73 & 112 Batavia-Sardinia Jackson-Rio Grande. Chardon-Andover Andover-Pennsylvania line Marion-Marysville. East Liverpool-Wellsville². Ottawa-Jet. 9 & 17. New Holland-Williamsport Greenville-Ft. Recovery. Manchester-McGaw Millville-Ross². Martinsburg-Walhonding Marietta-Woodsfield Jet. 89 & 6 d-Jet. 89 & U. S. 42² Jet. 157 & 79-Jet. 157 & U. S. 40. Fort Jennings-Jet. 115 & 189 Jet. 87 & 44-Jet. 82 & 44 Lodi-Jet. 17 & 13¹ Jet. 87 & 262-Jet. 100 & 262. Caldwell-Jet. 7 & 78. Delaware-Jet. 4 & 47. Greenfield-Blanchester Oak Harbor-Fremont West Milton-Jet. 29 & 71. Upper Sandusky-Delphos² Athalia-Crown City Xenia-Lebanon² Minster-Piqua. Jet. 78 & 77-Jet. 26 & 77. Holgate-Jet. 115 & 106 Troy-Covington. Windsor-Jet. 45 & 84 Columbus-Andersonville. Upper Sandusky-Kenton Pomeroy-Coolville. Jackson-Piketon. Jet. 64 & 184-Jet. 110 & 184 McArthur-Gillespieville Jet. 4 & 235-Jet. 53 & 235 Fremont-McClure New Philadelphia-Carrollton McClure-Napoleon Fostoria-Defiance² Medina-Jet. 17 & 57. Stryker-Jet. 66 & 191 Jet. 7 & 213-Jet. 7 & 213 (North of Steubenville) Jet. 7 & 213-Jet. 7 & 213 (North of Steubenville) Jet. 7 & 213-Jet. 53 & 134 Jet. 17 & 100-Jet. 62 & 61 Adelphi-Jet. 31 & 180 Wooster-Jet. 250 S. & 3² Coshocton-Jet. 19 & 76² Marion-Jet. 13 & 95 Sardinia-Jet. 53 & 134 Jet. 17 & 100-Jet. 62 & 100 Shawnee-Corning. Upper Sandusky-Jet. 5 & 182² Alliance-Edinburg Franklin-Hillsboro. Jet. 48 & 203-Jet. 74 & 132 Williamsburg-Owensville Cadiz-Jet. 55 & 149 Greenfield-Jet. 41 & 70 Jet. 48 & 203-Jet. 74 & 132 Williamsburg-Owensville Cadiz-Jet. 55 & 149 Greenfield-Jet. 41 & 70 Jet. 48 & 203-Jet. 74 & 132 Williamsburg-Owensville Waterville-Michigan line Waterville-Michigan line Waterville-Michigan line Waterville-Michigan line	73 74 111 85 85 4 77 17 10 U.S. 52 U.S. 52 206 8–26 8–26 8–26 8–26 8–26 8–26 77 189 44 17 262 71 189 44 17 262 71 189 44 17 28 662 71 189 44 17 28 662 71 181 213 661 184 U.S. 50 235 34 38 57 191 213 61 180 3–250 76 95 134 100 155 182 80 73 132 133 35 70 203 37 65 37 64	43 21 19 31 24 24 27 6 6 16 44 27 7 7 10 22 10 22 10 43 12 29 11 17 25 5 5 20 19 19 19 19 19 19 19 19 19 19 19 19 19	225 224 221 221 221 221 221 221 221 221 221	288 200 244 344 222 200 210 344 221 263 323 364 389 81 31 199 29 224 188 323 323 326 621 122 26 26 11 188 22 20 240 30 30 30 31 12 21 21 21 21 21 21 21 21 21 21 21 21		00000040000000000000000000000000000000	340 320 320 320 330 390 310 310 310 310 300 300 300 290 280 280 280 280 280 280 280 28	400 300 500 500 300 600 600 500 300 300 300 300 300 300 300 300 3		CCCCCCACCCCBCCCBCCCCCCCCCCCCCCCCCCCCCC	400 400 400 400 400 400 400 400 400 400	60 40 40 60 60 60 60 60 60 60 60 60 60 60 60 60	CCCCCCCACCCCBCCCBCCCCCCCCCCCCCCCCCCCCC
Athens-Jet. 56 & 180. Gallipolis-Kitts Hill. Marysville-London; Napoleon-Grand Rapids. Jet. U.S. 52 & 132-Batavia	56 141 38 U.S.24-65- 110 132	31 35 24 14	165 164 162 162	17 11 18 10		C	240 230 230 230 230	20 20 2 0 10		0000	300 300 300 300 300	30 30 30 20 50	
Monroeville-Willard Sidney-Versailles Jacksonville-Corning ²	99	14 18 10	160 160 158	18 17 23		0000	230 230 230 230	20 20 30	• • • • • • • •	C C B	300 300 300	30 30 40	C C B

				925				1930		1935			
Highway section	Route No.	High- way miles	Average daily motor	daily		Highway classi- fica-	Average daily motor	Average daily motor trucks 3-7½-ton		Highway classi- fica-	y Average daily motor	Average daily	classi-
			vehicles	Total	3-7½-ton loaded and empty	tion ¹	vehicles	Total	loaded and empty	tion1	vehicles	motor trucks	fica- tion ¹
Marshall-Idaho Urbana-Lisbon Madison-Jot. 85 & 166 (N.E. of Marion)² Jot. U. S. 30 & 61—Jot. U. S. 30 & 61. Ashland-Shelby Burton-Jot. U.S. 422 & 87 Troy-Jot. 48 & 55³ Springfield-Jot. 4 & 544 Hamilton-Jot. 128 & U. S. 27* Plymouth-Jot. 17 & 61³ Jot. 35 & 227—Jot. 151—227³ Jot. 18 & 109—Jot. U. S. 24 & 109³ Holgate-Jot. 18 & 1093 Jot. 252 & 253—Jot. U. S. 42 & 253³ Jot. 37 & 266—Jot. 77 & 266³ Jot. 37 & 266—Jot. 77 & 266³ Jot. 37 & 266—Jot. 77 & 266³ Jot. 37 & 266—Jot. 77 & 266³ McConnellsville North³ Jot. 62 & 228—Jot. 101 & 228³ Willard-Jot. 61 & 269³ Kingston-Jot. 10 & 159 Eaton-Gratis. Jot. 2 & 108—Jot. U.S. 20 & 108 Jot. 13 & 43—Jot. 18 & 80² Ripley-Manchester Spingfield-Fairfield Jot. 26 & 8—Jot. 7 & 8 Pomeroy-West Virginia line Jot. 3 & 82—Jot. 36 & 94 Latty-Jot. 15 & 113 Decatur-Pink Fremont-Erie Co. line. Jot. 33—Defiance Lebanon-Jot. 4 & 63 Sidney-Jot. 4 & 63 Sidney-Jot. 4 & 68 Ottawa-Jot. 31 & 81 Tiffin-Jot. U.S. 20 & 185 New London-Jot. 28 & 123 Jot. 19 & 76—Jot. 19 & 161 Urbana—Troy. Ada—Jot. 31 & 81 Tiffin-Jot. U.S. 20 & 185 New London-Jot. 59 & 60 Republic-Jot. 53 & 67 Middleport-Jot. U.S. 50 & 143 Circleville-Lancaster Glouster-Jot. 7 & 78 Greenfield-Washington C. H. Barnesville-Jot. 78 & 147 Jot. 43 & 80—Jot. 78 & 147 Jot. 43 & 80—Jot. 8 & 80 Staunton-Leesburg Vera Crus—Jot. 19 & 101 Urbana—Troy. Ada—Jot. 31 & 81 Tiffin-Jot. U.S. 20 & 185 New London-Jot. 19 & 60 Republic-Jot. 53 & 67 Middleport-Jot. U.S. 50 & 131 Jot. 21 & 45 & 45 & 10 Staunton-Leesburg Vera Crus—Jot. 19 & 104 Cedarville-Jot. 38 & 72 Cumberland-Concord Pennsylvania line—Jot. 14 & 165 Dreaden—Jot. 19 & 192 Cedarville-Jot. 38 & 72 Cumberland-Concord Pennsylvania line-Jot. 14 & 165 Dreaden—Jot. 19 & 20 & 62 Konton-Jot. 28 & 25 Jot. 16 & 25 & 66 Manchester—Bainbridge Delaware-Plain Cit	124 54 54 166 U.S. 30 96 87 55 4 128 61 227 109 18 253 266 76 New Route 228 122 108 18 U.S. 52 4 3-94 113 125 55 81 101-185 60 67 143 188 70 147 80 38 131 19 248 231 19 248 131 19 248 131 19 248 131 19 248 131 19 248 131 19 248 131 19 248 131 19 248 131 19 248 131 101-185 60 67 143 188 78 70 147 80 38 131 19 248 131 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 19 248 131 101 101 101 101 101 101 101 101 101	25 22 14 11 17 16 17 19 3 15 18 11 10 17 11 14 19 25 18 27 11 10 11 11 11 11 12 12 13 14 14 16 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	158 158 158 154 154 152 152 152 152 152 152 152 152	45 300 12 34 411 12 22 41 41 0 23 17 7 5 19		000#0000000000000000000000000000000000	220 240 230 230 230 230 230 230 230 230 230 23	40 20 20 20 20 30 30 30 10 20 20 20 20 20 20 30 30 30 30 30 30 30 20 20 20 20 20 20 30 30 30 30 30 30 30 30 30 30 30 30 30		000B00000B0000000000000000000000000000	300 300 300 300 300 300 300 300	30 30 30 30 30 30 30 30 30 30	CCO4CCCCCBCCCCCCCCCCCCACCCCCCCCCCCCCCCCC

				1925			1	1930		1935			
Highway section	Route No.	High- way miles	Average		age daily r trucks	Highway		Average daily motor trucks			A verage		
			daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica - tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion ¹
Indiana line—Jet. U.S. 40 & 48. Kenton—Bellefontaine. Jet. 129 & U.S. 27—Indiana line Findlay—Jet. 17 & 18. Dennison—Jet. U.S. 40 & S. Indiana line—Jet. 66 & 114. Jet. U.S. 422 & 80—Edinburg. Jet. U.S. 52 & 222—Jet. 125 & 222 Jet. U.S. 52 & 222—Jet. 125 & 222 Jet. U.S. 52 & 222—Jet. 125 & 222 Jet. U.S. 21 & 236—Jet. 93 & 236² Eaton—Indiana line. Jet. U.S. 52 & 133—Bethel Lisbon—Jet. 164 & 39 Jet. 3 & 205—Jet. 19 & 205 Jet. 32 & 117—Jet. 69 & 117 Coshocton—Jet. 95 & U.S. 21 Minford—Jackson Paulding—Jet. 9 & 15 Cambridge—Cadiz Jet. 54 & 119—Indiana line Bloomingburg—Jet. 3 & 238 Belfast—Cherry Fork Lower Salem—Jet. 78 & 145 Waverly—Jet. 124 & 220 Jet. 117 & 196—Jet. 32 & 196 Ross—Jet. 126 & 129 Dunkirk—Jet. 81 & 53 Sedalia—Washington C. H. Jet. 16 & 156—Jet. 77 & 156 Jet. 4 & 126—Jet. 9 & 126² Jet. 9 & 126—Jet. U.S. 27 & 126 Piqua—Jet. 48 & 120 Jet. 141 & 217—Jet. 7 & 217 Tippecanoe City—Jet. U.S. 40 & 71 Barnesville—2 miles from Bellaire Rutland—Berlin Fostoria—Carey² Oak Harbor—Jet. 33 & 136 Fort Jennings—Jet. 17 & 190 Defiance—St. Marys Albany—MoArthur Jet. 70 & 202—Jet. U.S. 40 & 202 Jet. U.S. 40 & 56—Jet. 29 & 56 Jet. 79 & 207—Jet. 79 & 95 Jet. 130 & 224—Indiana line St. Marys—Sidney Van Wert—Jet. 9 & 54 Quaker City—Jet. 17 & 48 Winchester—Jet. 73 & 74 Edinburg—Salem Meconnellsville—Caldwell Waynesburg—Jet. 171 & 43 Marietta—Amesville Lisbon—Negley Marseilles—Richwood Lasty-Payne Somerset—Jet. 10 & 75 Indiana line—Jet. 66 & U.S. 40 Wertminster—Jet. 67 & U.S. 20 Wert—Jet. 90 & 117 Penrysburg—Selem² Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 20 Wert—St. Marys Coshocton—Jet. 76 & U.S. 30 Wayashoneta—Jet. 66	U.S. 40 53 129 17 8 114 80 222 69 236 122 133 164 205 117 9-15 U.S 22 119 238 137 145 220 196 126 126 120 217 71 147 124 U.S. 23 105 233 150 66 U.S. 50 202 56 79 224 54 9 265 252 75 35 148 74 78 171 26 186 171 216 187 74 113 100 219 66 117 38 171 218 47 183 190 66 191 219 219 219 219 219 219 219 219 219	27 19 22 28 22 28 21 5 5 5 9 10 6 4 23 10 6 4 23 12 15 5 5 12 10 10 10 10 10 10 10 10 10 10 10 10 10	110 109 108 108 107 107 107 106 106 106 106 106 101 102 102 102 102 102 102 102	3 10 9 5 13 4 14 3 7		#5000000000000000000000000000000000000	170 150 170 160 150 160 150 150 150 150 150 150 150 150 150 15	10		#CCCCCCCACCCCCCCCCCCCCCCCCCCCCCCCCCCCC	220 200 210 200 200 190 200 190 190 190 190 190 190 180 180 180 180 170 170 170 200 170 170 170 170 170 170 170 1	10 20 30 20 20 20 20 20 20 20 20 20 20 20 20 20	40000000040000000000000000000000000000

				1	925			1	930			1935	
Highway section	Route No.	High- way miles	Average		ge daily trucks	Highway	Average	Average daily motor trucks		Highway	Average	Average	Highway
			daily	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion ¹	daily motor vehicles	daily motor trucks	classi- fica- tion ¹	
Pennsylvania line—Jct. 46 & 83 Jct. 225 & 14—Jct. 225 & 17 Thornville—Jct. 10 & 204 West Union—Jct. U.S. 52 & 247 Hayesville—Jct. 39 & 179 Hamilton—Jct. U.S. 27 & 130 Clyde—Jct. 101 & 185 Mt. Gilead—Sunbury Fremont—Jct. 34 & 101 Napoleon—Indiana line Loudonville—Jct. 3 & 250 S Pennsylvania line—Jct. 7 & 167 Celina—Jct. 66 & 197 Mingo Jct.—Yorkville Grafton—Jct. 252 & 57	83 225 204 247 179 130-224 101 61 34 U.S. 24 3 167 197 7	13 2 15 5 13 6 2 21 13 38 10 2 13 11	48 47 42 38 36 35 32 30 25 24 22 19	14 2 4 4 4 8 5 6 2 3 3 1		CCCCCCCCCCCBB	70 70 60 50 50 50 40 40 30 110 30 20	20 10 10 10 4 4 10 10 10 10 10 10 10 10 10 10 10 10 10		CCCCCCCCCAB	90 90 80 70 70 70 60 60 40 140 40 20	30 10 10 4 4 4 10 20 10 10 10 20 10	CCCCCCCCCAB
Navarre-Jot. U.S. 21 & 6 Yellow Creek-Wellsville. Sherrodsville-Bowerston Jot. 18 & 43-Jot. 17 & 43 Garrettsville-Parkman Chardon-Jot. 87 & 44 Jot. 86 & 166-Jot. 86 & 45 Twinsburg-Ravenna Jot. 88 & 45-Jot. 88 & 36 Russellville-Jot. 38 & 136 London-Plain City. Celina-Jot. 9 & 120 St. Marys-Jot. 9 & 54	U.S. 21 7 212 43 88 44 86 14 88 38 U.S. 42	7 1 5 6 5 7 10 14 10 19 17 20				BBCBCCCBCCCBC				B B C A C C B A C C C B			A B C A C C B A C C C B
Ada-Mt. Cory Hicksville-Edon Michigan line-Jct. U.S. 20 & 49 Newcomerstown-Isleta Jet. 258 & 8-Jet. 258 & U.S. 21 New Philadelphia-Seventeen Dover-Jct. U.S. 21 & 211 Jct. U.S. 30 & 226-Jct. 80 & 226 Madison-Jefferson Jct. 167 & 84-Jet. 167 & 7 Canfield-Jct. 46 & 164 Bellevue-Jct. 229 & 4	69 49 16 258 259 211 226 84 167 46 229	10 16 4 4 14 9 1 1 14 5 9				00090000000				CCCCBCCCCCCCC			0000400000000
Jet. 5 & 231–Jet. 182 & 231 Berne-Jet. 145 & 260. Fitchville-Savannah. Jet. 207 & 16–Jet. 207 & 79. Jet. 16 & 77–Jet. 16 & 207 Roscoe-Jet. 210 & 16. Cleveland-Jet. 232 & U.S. 42. Coolville-Jet. 144 & U.S. 50. New Matamoras-Bloomfield Isleta-Marquand Mills Bellaire-Fly. Jet. U.S. 21 & 92–Jet. 18 & 92. Crestline-Jet. U.S. 30 & 181.	231 260 6 207 16 210 232 144 245 75 75 92 181	1 7 10 13 19 2 3 6 8 11 42 2				CCCCBCCCCCBC				C C C B B B C C C C C B C			C C C B B B C C C C C B C
Mansfield-Creatline Jct. 157 & 237-Jet. U.S. 40 & 237 Worthington-Jet. 47 & 161 Mutual-Plain City. Georgetown-Ripley Lynchburg-Allensburg. Fayetteville-Jet. 53 & 251 Montgomery-Jet. 4 & 126 Covington-Jet. 120 & 48 Versailles-Jet. 120 & 48 Versailles-Jet. 9 & 120 Jet. 9 & 242-Jet. 121 & 242	101 5 237 161 161 221 135 251 126 48 120 120 242	11 11 25 19 9 2 5 7 2 9 4				08000000000000				BCCCCCBCCC			CBCCCCCCBCCCC
Versailles-Greenville Fort Recovery-Willshire Jot. 69 & 195-Jet. U.S. 30 & 195. Columbus Grove-Jet. 5 & 106. Hicksville-Jet. 249 & 108 Jet. 9 & 249-Jet. 9 & 15. Defiance-Archbold. Fostoria-Jet. 102 & 199. Grand Rapids-Jet. 110 & 64 Ashland-Jet. 58 & 89. Jet. 93 & U.S. 30. Jet. 172 & U.S. 30-Jet. 172 & 80.	121 51 195 106 108 9 66 199 110 58 93 172	11 22 8 9 7 3 16 28 10 9 7				CCCCCCCBCCCC				OCCCCC C BCCCC			CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Highway section	Route No.	High- way miles		925			1	.930	1935				
			Average	Averag motor		Highway	Average	Average daily motor trucks		Highway	Average	Average	Highway
			daily motor vehicles	Total	3-7½-ton loaded and empty	classi- fica- tion1	daily motor vehicles	Total	3-7½-ton loaded and empty	classi-	daily motor vehicles	daily motor trucks	classi- fica- tion ¹
Harrisburg—Jct. 19 & 173. Burton—Parkman Jct. U.S. 20 & 174—Jct. 43 & 174. Bedford—Warrensville. Twinsburg—Jct. 82 & 94 Aurora—Twinsburg. Jct. 90 & 170—Jct. 14 & 170. Jct. 7 & 165—Jct. 14 & 165. North Greene Co. line—Jct. U.S. 40.	175 82 82	11 7 6 6 14 6 4 9				A C C C B C C C C				A C C C B C C B			A C C C C C C B

